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UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF WYOMING

CORONAVIRUS REPORTER CORPORATION,  
CALID INC.,  
GREENFLIGHT VENTURE CORPORATION

*on behalf of themselves and  
all others similarly situated*

Plaintiffs,

vs.

APPLE INC.

Defendant.

Case No. **24-cv-53-SWS**

**SHERMAN ACT ANTITRUST  
CLASS ACTION**

**FIRST AMENDED COMPLAINT**

DEMAND FOR JURY TRIAL

<b>I.</b>	<b>Introduction.....</b>	4
<b>II.</b>	<b>Defendant Apple Inc.....</b>	10
A.	Apple launched the iPod, iTunes, and the iTunes Store against the backdrop of <i>United States v. Microsoft</i> .....	12
B.	Apple invited third-party investment on the iPhone and then imposed tight controls on app creation and app distribution.....	14
<b>III.</b>	<b>Class Action Plaintiffs.....</b>	18
<b>IV.</b>	<b>Smartphones As Platforms.....</b>	19
<b>V.</b>	<b>Related Global Antitrust Proceedings .....</b>	23
<b>VI.</b>	<b>Apple Unlawfully Maintains Its Monopoly Power .....</b>	26
A.	Apple harms competition by imposing contractual restrictions, fees, and taxes on app creation and distribution .....	26
i.	COVID-19 Tracking Apps: Apple’s Exclusionary Tactics Against Independent Scientists and Developers.....	29
B.	Apple uses APIs and other critical access points in the smartphone ecosystem to control the behavior and innovation of third parties in order to insulate itself from competition .....	38
i.	Cross-platform Videoconferencing: Apple protects its smartphone monopoly by degrading and undermining cross-platform video apps.....	38
C.	Apple’s “moat” around its smartphone monopoly is wide and deep: it uses a similar playbook to maintain its monopoly through many other products and services.....	46
<b>VII.</b>	<b>Anticompetitive Effects .....</b>	49
A.	Apple’s conduct harms the competitive process.....	49
B.	Apple has every incentive to use its monopoly playbook in the future .....	53
C.	Antitrust Injury Experienced by Class Member Developers of Free Apps .....	54
<b>VIII.</b>	<b>Privacy, Security, and Other Alleged Countervailing Factors Do Not Justify Apple’s Anticompetitive Conduct.....</b>	56
<b>IX.</b>	<b>The Smartphone Industry.....</b>	58
A.	Background .....	58
B.	Smartphone Hardware .....	59
C.	Smartphone Operating Systems, Applications, and Other Software .....	60
D.	Relevant Markets .....	62
i.	Performance smartphones are a relevant product market .....	63
ii.	Smartphones are a broader relevant product market.....	64
iii.	App Distribution Services (“App Stores”) is a relevant market .....	65
iv.	There is a relevant Sherman market for US Smartphone Apps (“software”) .....	66
v.	There is a relevant Sherman market for iPhone Notary Stamps .....	69
vi.	The United States is a relevant geographic market for performance smartphones and smartphones and downstream markets .....	72
E.	Apple has monopoly power in the smartphone and performance smartphone markets .....	74
<b>X.</b>	<b>Jurisdiction and Venue.....</b>	78
<b>XI.</b>	<b>Putative Class Definitions.....</b>	79
<b>XII.</b>	<b>Violations Alleged .....</b>	82
A.	First Claim for Relief: Monopolization of the Performance Smartphone Market in the United States in Violation of Sherman Act § 2.....	82

B. Second Claim for Relief, in the Alternative: Attempted Monopolization of the Performance Smartphone Market in the United States in Violation of Sherman Act § 2.....	83
C. Third Claim for Relief: Monopolization of the Smartphone Market in the United States in Violation of Sherman Act § 2 .....	84
D. Fourth Claim for Relief, in the Alternative: Attempted Monopolization of the Smartphone Market in the United States in Violation of Sherman Act § 2 .....	85
E. Fifth Claim for Relief: Illegal Tying Between [Performance] Smartphones/iPhone Devices and Notary Stamps / App Stores .....	86
F. Sixth Claim for Relief: Supra-competitive \$99 Fee Class Action Recovery Fund .....	90
G. Seventh Claim for Relief: <i>Aspen Skiing Co. v. Aspen Highlands</i> Exclusionary Conduct .....	92
H. Eighth Claim for Relief: Ranking Manipulation .....	95
I. Ninth Claim for Relief: Violation of Wyoming Consumer Protection Act and California Unfair Competition Law .....	97
<b>XIII. Request for Relief.....</b>	<b>103</b>

**PLAINTIFFS' AMENDED SHERMAN ACT CLASS ACTION COMPLAINT**

**I. Introduction**

1. For many years, Apple has built a dominant iPhone platform and ecosystem that has driven the company's astronomical valuation. At the same time, it has long understood that disruptive technologies and innovative apps, products, and services threatened that dominance by making users less reliant on the iPhone or making it easier to switch to a non-Apple smartphone.
2. Rather than respond to competitive threats by offering lower smartphone prices to consumers or better monetization for developers, Apple would meet competitive threats by imposing a series of shapeshifting rules and restrictions in its App Store guidelines and developer agreements that would allow Apple to extract higher fees, thwart innovation, offer a less secure or degraded user experience, and throttle competitive alternatives. It has deployed this playbook across many technologies, products, and services, including cross-platform video apps, COVID-19 apps, and many others.
3. Critically, Apple's anticompetitive conduct not only limits competition in the smartphone market, but also reverberates through the industries that are affected by these restrictions, including financial services, fitness, gaming, social media, news media, entertainment, and more. Unless Apple's anticompetitive and exclusionary conduct is stopped, it will likely extend and entrench its iPhone monopoly to other markets and parts of the economy. For example, Apple is rapidly expanding its influence and growing its power in the automotive, content creation and entertainment, and financial services industries—and often by doing so in exclusionary ways that further reinforce and deepen the competitive moat around the iPhone.
4. The significance of the litigation against Apple Inc. before this Court transcends mere economic concerns. It calls to question the very fabric of our societal order, defined and heavily

influenced under the shadow of Apple’s internet dominance. Apple’s conduct, unchecked for over a decade, impacts this nation on both a cultural and economic basis.

5. As described herein, the Defendant’s restraint of trade amounts to censorship of app developers, whose free distribution of creative works is subject to Apple’s authoritarian controls. For those apps that Apple does approve, the company requires compensation, representing a modern-day Stamp Tax.

6. Apple’s censorship mechanism functions primarily by tying app distribution to its iPhone smartphone, using a digital “notary stamp” to mark each piece of software approved in the App Store. This illegal *per se* tying, as elucidated in *Northern Pacific Railway Co. v. United States*, 356 U.S. 1 (1958), threatens the very pillars of free commerce and discourse over the internet.

7. This developer class action is about freeing smartphone markets from Apple’s anticompetitive and exclusionary conduct, restoring competition, and preserving innovation for the future. Plaintiffs and class members seek to redress Defendant Apple Inc.’s conduct that violates the Sherman Act of 1890 in the relevant markets for United States smartphones and/or performance smartphones, their software applications (“apps”), and their distribution channels (“app stores”).

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8. The Apple Computer Company, as it was then called, was founded in 1976 to make and market personal computers. From its inception, Apple had a knack for expensive, high-end design and niche marketing relative to its competitors. But it struggled to compete against rivals that offered lower prices and more programs. After two decades, Apple struggled to compete against Windows personal computers and by the late 1990s, it was on the brink of bankruptcy.

9. Apple’s experience with Mac’s easy to use GUI operating system, for decades considered a luxury many could not afford, ultimately set the stage for Apple’s most successful product yet. In 2007, Apple launched the iPhone, a smartphone that offered high-end hardware and software

applications, called “apps,” built atop a mobile operating system that mimicked the functionality and ease of use of a computer. Apple initially offered only a small number of apps that it created for the iPhone, having based that product off the success of the iPod mass-consumer device, combined with MacOS. But Apple quickly realized the enormous value that a broader community of entrepreneurial, innovative developers could drive to its users and the iPhone platform more broadly. Apple invited and capitalized on the work of these third parties while maintaining control and monetizing that work for itself. The value of third parties’ work served an important purpose for Apple. Indeed, as early as 2010, then-CEO Steve Jobs discussed how to “further lock customers into our ecosystem” and “make Apple[’s] ecosystem even more sticky.” Three years later, Apple executives were still strategizing how to “get people hooked to the ecosystem.”

10. That strategy paid off. Over more than 15 years, Apple has built and sustained the most dominant smartphone platform and ecosystem in the United States by attracting third-party developers of all kinds to create apps that users could download on their smartphones through a digital storefront called the App Store. As developers created more and better products, content, apps, and services, more people bought iPhones, which incentivized even more third parties to develop apps for the iPhone. Today, the iPhone’s ecosystem includes products, apps, content, accessories, and services that are offered by content creators, newspaper publishers, banks, advertisers, social media companies, airlines, productivity developers, retailers and other merchants, and others. As Apple’s power grew, its leverage over third parties reinforced its tight control over how third parties innovate and monetize on and off the smartphone in ways that were anticompetitive and exclusionary.

11. Apple keenly understands that while a community of developers is indispensable to the success of the iPhone, they also pose an existential threat to its extraordinary profits by empowering

consumers to “think different” and choose perfectly functional, less-expensive alternative smartphones.

12. Apple’s smartphone business model, at its core, is one that invites as many participants, including iPhone users and third-party developers, to join its platform as possible while using contractual terms to force these participants to pay substantial fees. At the same time, Apple restricts its platform participants’ ability to negotiate or compete down its fees through alternative app stores, censors apps that do not further their own strategic interests and partnerships, and more.

13. In order to protect that model, Apple reduces competition in the markets for performance smartphones and smartphones generally. It does this by delaying, degrading, or outright blocking technologies that would increase competition in the smartphone markets by decreasing barriers to switching to another smartphone, among other things. The suppressed technologies would provide a high-quality user experience on any smartphone, which would, in turn, require smartphones to compete on their merits.

14. Apple suppresses such innovation through a web of contractual restrictions that it selectively enforces through its control of app distribution and its “app review” process, as well as by denying access to key points of connection between apps and the iPhone’s operating system (called Application Programming Interfaces or “APIs”). Apple can enforce these restrictions due to its position as an intermediary between product creators such as developers on the one hand and users on the other.

15. This complaint highlights Plaintiffs’ examples of Apple using these mechanisms to suppress technologies that would have increased competition among smartphones. Suppressing these technologies does not reflect competition on the merits. Rather, to protect its smartphone monopoly—and the extraordinary profits that monopoly generates—Apple repeatedly chooses to make its products worse for consumers to prevent competition from emerging. These examples

below individually and collectively have contributed to Apple's ability to secure, grow, and maintain its smartphone monopoly by increasing switching costs for users, which leads to higher prices and less innovation for users and developers. Apple has used one or both mechanisms (control of app distribution or control of APIs) to suppress the following technologies, amongst others: COVID-19 Tracking Apps, Cross-Platform Video Apps, and the incorporated DOJ case-studies of Super-Apps, Cloud Streaming Apps, Messaging Apps and Digital Wallets.

16. By maintaining its monopoly over smartphones, Apple is able to harm consumers in a wide variety of additional ways. For example, by denying iPhone users the ability to choose their trusted banking apps as their digital wallet, Apple retains full control both over the consumer and also over the stream of income generated by forcing users to use only Apple- authorized products in the digital wallet. Apple also prohibits the creation and use of alternative app stores curated to reflect a consumer's preferences with respect to security, privacy, or other values. These and many other features would be beneficial to consumers and empower them to make choices about what smartphone to buy and what apps and products to patronize. But allowing consumers to make that choice is an obstacle to Apple's ability to maintain its monopoly.

17. Of course, this is not the story Apple presents to the world. For decades, Apple branded itself a nimble, innovative upstart. In 1998, Apple co-founder Steve Jobs criticized Microsoft's monopoly and "dirty tactics" in operating systems to target Apple, which prompted the company "to go to the Department of Justice" in hopes of getting Microsoft "to play fair." But even at that time, Apple did not face the same types of restrictions it imposes on third parties today; Apple users could use their iPod with a Windows computer, and Microsoft did not charge Apple a 30 percent fee for each song downloaded from Apple's iTunes store. Similarly, when Apple brought the iPhone to market in 2007, it benefited from competition among component makers and wireless carriers.

18. The ramifications of Apple’s anticompetitive conduct are not always obvious in the immediate term. But they are no less harmful and even more widespread, affecting all smartphone consumers and developers. Apple’s smartphone monopoly means that it is not economically viable to invest in building some apps, such as COVID-19 tracking apps and cross-platform video apps, when Apple will censor or self-preference their own apps. This means that innovations fueled by an interest in building the best, most user-focused product that would exist in a more competitive market never get off the ground. What’s more, Apple itself has less incentive to innovate because it has insulated itself from competition.

19. Moreover, according to the DOJ, Apple has demonstrated its ability to use its smartphone monopoly to impose fee structures and manipulate app review to inhibit aggrieved parties from taking advantage of regulatory and judicial solutions imposed on Apple that attempt to narrowly remedy harm from its conduct.

20. Smartphones have so revolutionized American life that it can be hard to imagine a world beyond the one that Apple, a self-interested monopolist, deems “good enough.” But under our system of antitrust laws, as the DOJ remarked, “good enough” is, quite simply, not enough. Consumers, competition, and the competitive process—not Apple alone—should decide what options consumers should have. And competition, not Apple’s self-interested business strategies, should be the catalyst for innovation essential to our daily lives, not only in the smartphone market but in closely related industries like personal entertainment, automotive infotainment, and even more innovations that have not yet been imagined. Competition is what will ensure that Apple’s conduct and business decisions do not thwart the next Apple.

21. For nearly fifteen years, the internet as most Americans know it has been crafted and controlled by Apple Inc’s exploitative policies. This has resulted in consequences that are admittedly difficult to assess, as for many it is difficult to now imagine a world without the iPhone.

But what we do know is that Apple monetized people's attention, encouraging addicting apps and services that now constitute about a third – and growing – portion of Apple's profits. In other words, Apple as an ongoing concern requires increasing monetization of daily activities, rather than sale of hardware.

22. Apple's censorship of the internet is increasingly authoritarian. With the Coronavirus Reporter app, Apple prevented a world-renowned scientist from distributing a competing COVID app. We are approaching twenty years of an internet controlled by Apple. The internet has transformed our lives. But a free internet – one that could grow without Apple's corporate vice – is something we have never experienced as a nation. The time to liberate the nation's internet is now – not six months or six years from now.

23. Protecting competition, inherent freedoms and autonomy of consumers and developers alike, and the innovation that competition inevitably ushers is why Plaintiffs bring this lawsuit under the Sherman Act to challenge Apple's maintenance of its monopoly over smartphone markets, which affect hundreds of millions of Americans every day. Plaintiffs bring this case to rid smartphone markets of Apple's monopolization and exclusionary conduct and to ensure that the next generation of innovators can upend the technological world as we know it with new and transformative technologies. Plaintiffs and class members hereby express their gratitude for the tireless work of Department of Justice Antitrust Division officials who have diligently researched the underlying claim theories upon which this developer compensation fund lawsuit is based upon.

## **II. Defendant Apple Inc.**

24. Apple is a global technology company with headquarters in Cupertino, California. Apple is one of the world's most valuable public companies with a market capitalization over \$2.5 trillion. In fiscal year 2023, Apple generated annual net revenues of \$383 billion and net income of \$97

billion. Apple's net income exceeds any other company in the Fortune 500 and the gross domestic products of more than 100 countries.

25. The iPhone, Apple's signature product, is the primary driver of Apple's growth and profitability, routinely commanding profit margins of more than 30 percent on devices alone—significantly higher than its smartphone competitors. iPhone sales have made up a majority of Apple's annual revenue every year since 2012.

26. Apple increasingly extracts revenue from iPhone users beyond the initial smartphone sale. For example, Apple offers iPhone upgrades, apps and in-app payments, paid digital subscription services (e.g., Apple's music streaming, TV, news, gaming, fitness, and cloud storage subscriptions), accessories (e.g., tracking devices, headphones, chargers, iPhone cases), and more. Apple refers to these offerings as "Services" and "Wearables, Home, and Accessories," respectively. In fiscal year 2023, these offerings accounted for nearly one-third of Apple's total revenue, or four times what Apple earned from selling Mac computers. Some of the largest drivers of revenue within these categories are Apple's smartwatch, the Apple Watch, and Apple's App Store, where iPhone users purchase and download apps. In recent years, Services have accounted for an increasing share of Apple's revenues, while the iPhone has remained the primary gateway through which U.S. consumers access these services.

27. Apple's U.S. market share by revenue is over 70 percent in the performance smartphone market—a more expensive segment of the broader smartphone market where Apple's own executives recognize the company competes—and over 65 percent for all smartphones. These market shares have remained remarkably durable over the last decade.

28. Apple's smartphone market shares understate Apple's dominance and likely growth in key demographics, including among younger American consumers. For example, one- third of all iPhone users in the United States were born after 1996, as compared to just 10 percent for Samsung,

Apple's closest smartphone competitor. Surveys show that as many as 88 percent of U.S. teenagers expect to purchase an iPhone for their next smartphone. iPhone users also tend to come from higher income households. Because smartphone users generally use a single smartphone to access related products and services, locking up key user groups allows Apple to capture greater spending on iPhone-related products and services, realize higher margins per user as compared to its smartphone rivals, and exercise greater control over developers and other smartphone ecosystem participants.

29. In fiscal year 2023, Apple spent \$30 billion on research and development. By comparison, Apple spent \$77 billion on stock buybacks during the same year.

30. Apple was founded in 1976. During its first 25 years, the company focused in large part on producing and marketing personal computers. Although the market for personal computers expanded over the next several decades, Apple struggled to gain customer adoption for its higher-priced products relative to its lower-cost competitors, including IBM and Microsoft. In the late 1990s, Apple significantly restructured the company and embarked on a new strategy focused not just on selling personal computers, but also consumer devices like the iPod, which led to the development of the iPhone.

**A. Apple launched the iPod, iTunes, and the iTunes Store against the backdrop of *United States v. Microsoft***

31. When Apple began developing mobile consumer devices, it did so against the backdrop of *United States v. Microsoft*, which created new opportunities for innovation in areas that would become critical to the success of Apple's consumer devices and the company itself. For example, the iPod did not achieve widespread adoption until Apple developed a cross-platform version of the iPod and iTunes for Microsoft's Windows operating system, at the time the dominant operating system for personal computers. In the absence of the consent decree in *United States v. Microsoft*, it would have been more difficult for Apple to achieve this success and ultimately launch the iPhone.

Apple’s development of cross-platform technologies, including Quicktime and iTunes, are described in detail in *United States v. Apple Inc.* That Department of Justice antitrust complaint is incorporated herein by reference as Exhibit A. Plaintiffs and class members assert all allegations of the DOJ complaint; to the extent any minor differences exist between the two complaints, they shall be considered alternate claims for jury deliberation.

32. Within a year of launching the iPhone, Apple invited third-party developers to create native apps for the iPhone. Apple released its first software development kit—essentially the digital tools for building native apps on Apple’s operating system (iOS)—to encourage and enable third-party developers to create native apps for the iPhone. Apple also offered developers ways to earn money by selling apps and later in-app purchases and subscriptions. By 2009, Apple was running marketing campaigns highlighting the value that third-party apps provide to iPhone users with the trademarked slogan: “There’s an app for that.”

33. Apple’s decision to invite third-party participation on its iPhone platform benefited Apple, too. The proliferation of third-party apps generated billions of dollars in profits for Apple and an iPhone user base of more than 250 million devices in the United States. Apple’s market shares—over 70 percent of the performance smartphone market and over 65 percent of the broader smartphone market—likely understate its monopoly power today.

34. While Apple profits from third-party developers that increase the iPhone’s value to users, Apple executives understand that third-party products and services can, in their own words, be “fundamentally disruptive” to its smartphone monopoly, decreasing users’ dependence on Apple and the iPhone and increasing competitive pressure on Apple. Apple therefore willingly sacrifices the short-term benefits it would gain from improved products and services developed by third parties when necessary to maintain its monopoly.

**B. Apple invited third-party investment on the iPhone and then imposed tight controls on app creation and app distribution**

35. Apple controls how developers distribute and create apps for iPhone users. For example, developers can only distribute native iPhone apps through Apple's App Store, which is the only way for users to download native iOS apps. Limiting distribution to the Apple App Store enables Apple to exert monopoly power over developers by imposing contractual restrictions and rules that limit the behavior of non-Apple apps and services. Specifically, Apple sets the conditions for apps it allows on the Apple App Store through its App Store Review Guidelines. Under these guidelines, Apple has sole discretion to review and approve all apps and app updates. Apple selectively exercises that discretion to its own benefit, deviating from or changing its guidelines when it suits Apple's interests and allowing Apple executives to control app reviews and decide whether to approve individual apps or updates. Apple often enforces its App Store rules arbitrarily. And it frequently uses App Store rules and restrictions to penalize and restrict developers that take advantage of technologies that threaten to disrupt, disintermediate, compete with, or erode Apple's monopoly power.

36. Apple today wields authoritarian control over the vast network of interconnected smartphones that, combined, represent an extraordinary computational-communications capability ("network effect"). After the United States government spent decades building DARPA, what is now known as the Internet, we as a nation collectively invested in putting a smartphone, an amalgamation of a screen, sensors, operating system, and communication radios, in the hands of nearly every citizen, forming a network with capabilities amounting to science-fiction of prior generations. But it is Apple that benefits from growing "services revenue" representing its own tax on nearly the entire internet economy created in large part by the United States government and its taxpayers.

37. This action asserts that the vast network capabilities of interconnected smartphones are the property of the customers who paid for them. Apple iPhone users should enjoy unrestricted use of their smartphones to run necessary applications, such as COVID-19 Tracking Apps or cross-platform video apps, that ultimately are the *raison d'être* of this network. Free markets should define what apps are selected by end-users, as opposed to Apple's regime.

38. By requiring all apps be sourced from the App Store, Apple has exclusive control over iOS applications and their ability to access that national internet backbone. Apple has profited immensely from the existence of the national TCP/IP internet backbone, ARPANET. Without the internet, and the taxpayer dollars that built it, the Apple "ecosystem" would be non-existent. The Apple smartphone ecosystem is essentially a sub-net of the internet connecting compatible Apple devices over a common graphical user interface (GUI).

39. The Apple iOS platform and ecosystem operates over the entire internet connected network of the iPhone userbase. The inherent value of the ecosystem ultimately derives from decades of government initiatives to develop the national internet backbone, and Apple's decades of research into Mac software usability. The confluence of these two technologies permitted Apple to obtain their present-day monopoly derived from the undeniably strong "network effect" of hundreds of millions of interconnected devices.

40. Apple also controls app creation by deciding which APIs are available to developers when they make third-party apps. For example, developers cannot provide native apps on the iPhone unless they enter into Apple's non-negotiable Developer Program License Agreement (DPLA). That agreement requires developers to use public APIs only "in the manner prescribed by Apple." It also prohibits third-party apps from using APIs that Apple designates as "private." Apple selectively designates APIs as public or private to benefit Apple, limiting the functionality

developers can offer to iPhone users even when the same functionality is available in Apple's own apps, or even select third-party apps. Similar to Apple's App Store restrictions, Apple uses its DPLA to impose restrictions that penalize and restrict developers that take advantage of technologies that threaten to disrupt, disintermediate, compete with, or erode Apple's monopoly power.

41. Developers cannot avoid Apple's control of app distribution and app creation by making web apps—apps created using standard programming languages for web-based content and available over the internet—as an alternative to native apps. Many iPhone users do not look for or know how to find web apps, causing web apps to constitute only a small fraction of app usage. Apple recognizes that web apps are not a good alternative to native apps for developers. As one Apple executive acknowledged, “[d]evelopers can't make much money on the web.” Regardless, Apple can still control the functionality of web apps because Apple requires all web browsers on the iPhone to use WebKit, Apple's browser engine—the key software components that third-party browsers use to display web content.

42. Nor can developers rely on alternative app stores even though this would benefit developers and users. For example, developers cannot offer iPhone users an app store that only offers apps curated for use by children, which would provide opportunities to improve privacy, security, and child safety. By contrast, Apple allows certain enterprise and public sector customers to offer versions of app stores with more curated apps to better protect privacy and security.

43. Apple's control over both app distribution and app creation gives Apple tremendous power. For example, Apple designates as “private” the APIs needed to send Short Message Service, or SMS, text messages, which is a protocol used by mobile carriers since the early 1990s to allow users to send basic text messages to other mobile phone numbers using their own mobile phone numbers. Developers have no technical means to access these private APIs, but even if they did,

doing so would breach their developer agreement with Apple, and therefore put the developer at risk of losing the ability to distribute apps through the App Store. For example, Apple prohibits third-party iPhone apps from sending or receiving SMS text messages even though this functionality is available through Apple Messages. Likewise, Apple can control the functionality of third-party apps and accessories through its control of app distribution because if an app includes functionality that Apple does not like, Apple can and does exercise its discretion to simply block the app from the App Store.

44. This API restriction is in stark contrast to the history of Mac OS. Mac OS built its success as a relatively open-architecture platform, where developers could access API and low-level operating system calls. They did so by adding “System Extensions,” “Control Panels,” and other operating system add-ons that fundamentally improved the Mac experience by allowing competition and innovation into the core of the Mac experience. iOS restricted all of these abilities, key to the Mac’s success, as soon as they realized they could monopolize the smartphone sector without handing over access to developers.

45. Apple’s dominance is such that neither app developers nor iPhone users can benefit from lower cost or higher quality means of distributing apps or purchasing and providing digital products and services. Instead, Apple guarantees that it continues to benefit from the contributions of third-party developers and other platform participants while also protecting itself from the competitive threats and pressure those participants pose to Apple’s smartphone monopoly.

46. This complaint focuses on Apple’s use of its dominance to impose contracts and rules that restrict the behavior and design decisions of companies *other* than Apple. Apple’s iPhone success functionally relies upon and profits immensely from access to the taxpayer-funded national internet backbone, and longstanding government efforts to foster competition amongst technology firms. Because the App Store engages in Sherlocking and Self-preferencing, and rejects some 40,000 apps

per week, it causes millions of person-years of economic losses, and a vastly sub-optimal “network effect” of the Internet connected smartphones and performance smartphones.

### **III. Class Action Plaintiffs**

47. Plaintiff Coronavirus Reporter Corporation is a Wyoming C Corporation. Coronavirus Reporter is also the name of the Plaintiff’s iPhone application, which attempted to use the national internet backbone for the first time in the history of pandemics to allow citizens to self-report and geolocate emerging epidemiological trends. Written in February 2020, it is believed to have been the first-mover in the entire group of “COVID-19 tracking startups” banned by Apple on March 6, 2020. The company appointed renowned cardiologist Dr. Robert Roberts as Chief Medical Officer. *See Exhibit B – Dr. Roberts’ CV.* Dr Roberts at all times has had full and final authority over the app, which comprised his team’s medical scientific work product.

48. CALID Inc. (hereafter “CALID”) is a Wyoming C corporation founded in 2016. CALID paid nearly a decade of \$99 Apple Developer Program mandated subscription fees to participate in the Apple ecosystem. CALID paid the \$99 fee as recently as October 2023. Each annual supra-competitive subscription fee constitutes an independent transaction that constitutes evidence of Sherman Act violation.

49. Greenflight Venture Corporation (hereafter “Greenflight” or “GFVC”) is a Florida C Corporation, founded in 2013. Greenflight has invested in dozens of technology initiatives over the years. It provided the entire funding for Calid and CRC’s development, positioning Greenflight to benefit from venture investments. The majority of Greenflight’s investment funds stemmed from an iOS App “Caller ID,” ranked in the App Store Top-10 for many years, as well as OkCaller.com, ranked nearly a decade in Google SERPs Top-10 for phone lookup. Greenflight, like other Plaintiffs and class members, suffered losses when Apple censored its apps, Sherlocked its ideas, restricted and/or manipulated app search rankings, and charged over \$1000 in supra-competitive DPLA fees.

#### IV. Smartphones As Platforms

50. Smartphones combine the functionality of a traditional mobile phone with advanced hardware and software components. This cluster of services and features results in a distinct product for consumers and developers. For example, smartphones not only make phone calls, but also allow users to listen to music, send text messages, take pictures, play games, access software for work, manage their finances, and browse the internet.

51. Platforms such as smartphones bring together different groups that benefit from each other's participation on the platform. A food delivery app, for example, is a multi-sided platform that brings together restaurants, couriers, and consumers. A two-sided platform, for example, may bring together service providers on the one hand and consumers on the other. The technology and economics of a smartphone platform are fundamentally different from the technology and economics of a simultaneous transaction platform, such as a credit card, because smartphone platforms compete over device features and pricing in ways that do not directly relate to app store transactions. Whereas credit card transactions reflect a single simultaneous action that requires both sides of the transaction for either side to exist, consumers value smartphone platforms for a variety of reasons separate from their ability to facilitate a simultaneous transaction. Consumers care about non-transactional components of the phone, such as its camera and processing speed, and they care about non-transactional components of apps, such as their features and functionality.

52. The economics of a smartphone platform are such that the platform's value to users—and in turn to the platform operator—increase when new apps and new features are added to the platform. In order to create these economic benefits for itself and its users, Apple has partially opened its smartphone platform to third-party developers, whose countless inventions and innovations have created enormous value. Apple has willingly opened the platform to third-party developers to capture this value even though there is no extensive regulatory framework requiring it to do so or

overseeing how it interacts with those third parties. In this way, smartphone platforms are very different from other platforms, like landline telephone networks, whose value-adding features were built primarily by the platform operator and which were only opened to third parties when the platform operator was required to do so by regulation. When a third-party developer for the iPhone creates a valuable new feature, consumers benefit and consumer demand goes up for Apple's products, increasing the economic value of the iPhone to Apple. This has played out hundreds of thousands of times for the iPhone, resulting in an enormously valuable smartphone platform reflecting the combined contributions of millions of developers.

53. In contrast, limiting the features and functionality created by third-party developers—and therefore available to iPhone users—makes the iPhone worse and deprives Apple of the economic value it would gain as the platform operator. It makes no economic sense for Apple to sacrifice the profits it would earn from new features and functionality unless it has some other compensating reason to do so, such as protecting its monopoly profits.

54. The iOS Platform is part of the broader All Historic Computing Platforms, which includes Windows, Mac, Android, and potentially early predecessors Atari and Commodore. In this historical sense, a platform such as Windows references compatible devices, programming tools, and accessories. It is important to clarify that consumers purchase products within such platforms; devices may be compatible within the specifications of a platform, but are not inherently a software platform *per se*.

55. Like historic computing platforms, consumer electronics like TVs and VCRs were developed to provide access to compatible content. TVs facilitated access to broadcast content, while VCRs allowed users to record, store, and play back that content at their convenience. Early personal computers, similarly, were developed to run software applications that perform a wide

range of tasks, from word processing to complex calculations and even gaming. These devices became essential tools for accessing and interacting with creative works developed by third parties.

56. The iPhone, and by extension, other smartphones, are modern continuations of this lineage. Initially conceptualized as a device to make calls, store information, and later, access the internet, the iPhone's primary function has expanded significantly. Today, it serves as a gateway to a myriad of applications, fostering a digital ecosystem where software developers can create and distribute content ranging from productivity tools to entertainment apps. This evolutionary trajectory underscores the smartphone's role as a device aimed at running network interactive software applications, similar to how VCRs were designed to play tapes and televisions to display broadcast content.

57. By way of background, Apple CEO Tim Cook has acknowledged, in another antitrust trial, that users primarily purchase devices, not the software ecosystems that accompany them. This admission underscores the dissonance between Apple's public positioning of iOS as the heart of the iPhone experience and the historical role of devices as conduits to the broader world of software and content.

58. The acknowledgement of a iOS as computing platform in no way whatsoever intends to amplify Apple's restrictive control over the software ecosystem, veiling the hardware's fundamental purpose: to serve users as a medium for accessing and running third-party applications. Apple's conflation of "walled garden ecosystems" with the iOS platform reveals a concerning oversight of the fundamental nature of devices — they are, at their core, tools designed to deliver access to technological innovations and creative content, not restrict or monetize every aspect of access to that platform.

59. By treating iOS as more than what it essentially is — akin to the BIOS of a CD player, alarm clock, or VCR — one risks legitimizing Apple's gatekeeping role, whereby the company

imposes arbitrary constraints on which software can run on its hardware and under what conditions. This approach is starkly antithetical to the historical development and societal role of technological devices, which have always been about expanding user access to content and functionalities, not curtailing it.

60. By tightly integrating iOS with the iPhone's hardware, Apple has erected barriers that limit the device's potential and the opportunities for software developers. This integration acts as both a gate and a toll booth, with Apple deciding which apps can access the market and imposing a "tax" on transactions within those apps. Far from being a neutral platform facilitating software distribution, iOS has become a tool for Apple to exert undue influence over the digital marketplace, engaging in practices that border on censorship.

61. In essence, Apple's model resembles a hypothetical pay-per-view VCR that charges users each time they wish to play a movie — a concept that would have been deemed absurdly restrictive in the era of physical media devices. The key distinction lies in the control exerted over the software, turning the iPhone from a device that should empower users into one that channels them into a monetized, Apple-controlled experience.

62. Clear precedent set by decades of technological development evidences that devices served as platforms in a literal sense, enabling access to a wide range of third-party innovations without imposing restrictive controls or fees. Only by recognizing the iPhone as a device primarily meant to run software, in line with the tradition of VCRs, TVs, and computers, can we ensure that technological innovation continues to thrive in an open, competitive environment. While iOS may be bundled with a device, like Windows computers are often bundled with low-priced OEM versions of Windows, or an alarm clock is "bundled" with a BIOS, fundamentally, consumers purchase hardware iPhone devices, each a part of the iOS platform specification.

## V. Related Global Antitrust Proceedings

63. This case is an unprecedented confrontation with the largest monopoly in history, Apple Inc.—a \$3 trillion behemoth whose market valuation eclipses that of the classic textbook example, the British East India Company, by tenfold. With iPhone's 65% market share, the vast majority of Americans find themselves with limited alternatives for conducting the essential tasks of daily life. Defendant's illegal trust operations extend beyond economic ambitions; this case concerns Apple's desire to censor industries from health care to automotive, and effect cultural political development on a worldwide basis. Apple's control over their userbase forms the largest censorship and surveillance network in world history.

64. There exist reasons the Sherman Act was legislated to preempt one company taking on monopoly powers that could ultimately endanger not only the progress of scientific medical work like Dr. Roberts' COVID app, but even geopolitical entities. This Complaint describes an “international consensus,” which Apple cannot refute exists, that denounces Apple's anticompetitive censorship.

65. Every effort until now has failed to deter Apple. In 2010, the United States Copyright Office recognized the right of iPhone users to utilize their property free from Apple's control:

*“the activity of an iPhone owner who modifies his or her iPhone's firmware/operating system in order to make it interoperable with an application that Apple has not approved, but that the iPhone owner wishes to run on the iPhone, fits comfortably within the four corners of fair use.”*

66. Apple swiftly maneuvered around the Copyright Office's decision by implementing aggressive changes to its programming code.

67. The “Investigation of Competition in Digital Markets” majority staff report and recommendation by the United States House of Representatives Subcommittee on Antitrust, incorporated herein and referred to as the “House report.” *See Exhibit C.*

68. Described is Apple's history of "closely monitoring the success of apps in the App Store, only to copy the most successful." Called "Sherlocking," Apple "takes other companies innovative features," which was the case with Coronavirus Reporter and Facetime 15/WebCaller. Plaintiffs and class members have experienced such anti-competitive behavior as described in the report.

69. Apple benefits immensely from a ranking system that favors their own rival apps, according to the report. Some searches reveal "14 Apple apps before showing results from rivals." The report documents that Apple "holds [competitor apps] to a different standard" than its own apps, which is precisely what happened to Plaintiff CRC, and other class members. Such ranking unfairness has directly harmed Plaintiffs and class members.

70. This Complaint corroborates the Subcommittee Report revelation that Apple "closely monitors the success of apps in the App Store, only to copy the most successful. Apple takes other companies innovative features." Plaintiffs' software products were subjected to the conduct spotlighted in the Subcommittee Report. As a result, Plaintiffs have standing to bring a tying cause of action similar to that advanced by multiple academic papers on the Apple monopoly, such as Loyola Law Review's *Epic Games v. Apple: Tech-Tying and the Future of Antitrust*.

71. The House Report additionally details how Apple makes \$2.7 billion annually simply from charging developers \$99 to access their platform. This supra-competitive fee is more than quadruple the fee of the nearest rival, and has directly harmed Plaintiffs and class members.

72. The Subcommittee remarked on unambiguous legislative intent regarding Court enforcement of Sherman:

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*"courts have adopted the view that underenforcement of the antitrust laws is preferable to overenforcement, a position at odds with the clear legislative intent of the antitrust laws."*

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73. When the United States sought regulation of AT&T, concerns mounted that telecommunication quality and cost would suffer from government intervention. That of course was plain wrong, as a telecommunications revolution occurred the following decade. The stakes here are higher than in 1984: 80% of commerce now takes place on Apple devices, and the entire free speech of a nation depends on its “network effect” infrastructure. Like Microsoft, and AT&T, redressing Apple’s monopoly should usher in the benefits of improved competition.

74. The bipartisan Senate “Open App Markets Act” introduced in 2021 by Senior Senator Blumenthal. The Act’s Section 3(d) on “interoperability” requires the App Store allow direct app loading and eliminate search ranking self-preference. Seventy-three percent of Americans supported now-disappeared 2023 legislation in the United States Senate to address app censorship and self-preferencing, which Senior Senator Blumenthal described as the “most offensive practice of how [Apple] strangles new app development.” Senate Majority Leader Chuck Schumer of California never brought the bill to floor vote.

75. A European Commission investigation into the App Store resulted in the Digital Markets Act legislation, which recently went into effect and which mandates App Store modifications similar to this complaint and Open App Markets Act. At time of filing, Apple engaged in malicious compliance with the DMA by directly charging for notary stamps on an annual basis. Apple calls their notary stamp charges a “Core Technology Fee” (CTF) which costs about fifty euro cent per app. The EU recently issued a notice that the CTF violates the DMA, and indeed, Apple is willfully violating the DMA in order to protect its notary stamp monopoly.

76. Apple is similarly in malicious compliance of a verdict in *Epic v. Apple*, 20-cv-5640-YGR. This conduct again seeks to charge for notary stamps and IAP fees, through an improper commission on developers.

77. Apple's DMA and Epic's non-compliance is possible because Apple requires notarization of all apps. In other words, if Apple didn't implement notarization locks on iPhones, they would have no ability to block compliance with the DMA and *Epic* verdict. It therefore is evident that Apple obtains profits – and is fighting vigorously to maintain these profits - from notarization techniques. This evidences the existence of a market for notary stamps and services fees.

78. A developer class action antitrust lawsuit filed in 2019 alleged App store violations of Sherman in the app distribution aftermarket. *Cameron et al v, Apple*, 19-cv-3074-YGR. The *Cameron* class is restricted to app developers who sold apps for non-zero prices. The case settled with little to no meaningful changes in the smartphone market. Nonetheless, it formed Developer Compensation Fund, serving as precedent for the fund sought in this case.

## **VI. Apple Unlawfully Maintains Its Monopoly Power**

### **A. Apple harms competition by imposing contractual restrictions, fees, and taxes on app creation and distribution**

79. Apple's internal documents show that, soon after the iPhone's introduction and notwithstanding its success, the company began to fear that disintermediation of its platform and the commoditization of the iPhone would threaten Apple's substantial profits from iPhone sales and related revenue streams.

80. Accordingly, Apple exercised its control of app creation and app distribution in key cases to cement the iPhone and App Store as the primary gateway to apps, products, and services. Apple often claims these rules and restrictions are necessary to protect user privacy or security, but Apple's documents tell a different story. In reality, Apple imposes certain restrictions to benefit its bottom line by thwarting direct and disruptive competition for its iPhone platform fees and/or for the importance of the iPhone platform itself.

81. Three aspects of Apple’s efforts to protect and exploit its smartphone monopoly are worth noting. First, Apple exercises its control over app distribution and app creation to dictate how developers innovate for the iPhone, enforcing rules and contractual restrictions that stop or delay developers from innovating in ways that threaten Apple’s power. In so doing, Apple influences the direction of innovation both on and off the iPhone.

82. Second, Apple drives iPhone users away from products and services that compete with or threaten Apple. In doing so, Apple increases the cost and friction of switching from the iPhone to another smartphone and generates extraordinary profits through subscription services (like Apple’s proprietary music, gaming, cloud storage, and news services), advertisements within the App Store, and accessories like headphones and smartwatches.

83. Third, Apple uses these restrictions to extract monopoly rents from third parties in a variety of ways, including app fees and revenue-share requirements. For most of the last 15 years, Apple collected a tax in the form of a 30 percent commission on the price of any app downloaded from the App Store, a 30 percent tax on in-app purchases, and fees to access the tools needed to develop iPhone native apps in the first place. While Apple has reduced the tax it collects from a subset of developers, Apple still extracts 30 percent from many app makers. Apple also generates substantial and increasing revenue by charging developers to help users find their apps in the App Store—something that, for years, Apple told developers was part of the reason they paid a 30 percent tax in the first place. For example, Apple will sell keyword searches for an app to someone other than the owner of the app. Apple is able to command these rents from companies of all sizes, including some of the largest and most sophisticated companies in the world.

84. As Apple exercised its control of app distribution and app creation, Apple slowed its own iPhone innovation and extracted more revenue and profit from its existing customers through subscriptions, advertising, and cloud services. These services increase the cost of switching from

the iPhone to another smartphone because many of these services—including its proprietary gaming, cloud storage, and news service—are exclusive to the Apple ecosystem, causing significant frictions for iPhone users who try to use alternative services on another smartphone. Moreover, Apple’s conduct demonstrates that Apple recognized the importance of digital products and services for the success of the iPhone while at the same time it restricted the development and growth of non-iPhone products and services—especially those that might make it easier for users to switch from the iPhone to another smartphone.

85. Each step in Apple’s course of conduct built and reinforced the moat around its smartphone monopoly. The cumulative effect of this course of conduct has been to maintain and entrench Apple’s smartphone monopoly at the expense of the users, developers, and other third parties who helped make the iPhone what it is today. Despite major technological changes over the years, Apple’s power to control app creation and distribution and extract fees from developers has remained largely the same, unconstrained by competitive pressures or market forces. That this conduct is impervious to competition reflects the success of Apple’s efforts to create and maintain its smartphone monopoly, the strength of that monopoly, and the durability of Apple’s power.

86. Apple’s monopoly maintenance has taken many forms and continues to evolve today; however, Apple’s anticompetitive and exclusionary course of conduct is exemplified by its contractual rules and restrictions targeting distinct products and services, including COVID-19 Tracking Apps and Cross-Platform Video Apps. Further Examples cited in *United States v. Apple* include super apps, cloud streaming apps, messaging apps, smartwatches, and digital wallets. Those are incorporated herein via Exhibit A. By stifling these technologies, and many others, Apple reinforces the moat around its smartphone monopoly not by making its products more attractive to users, but by discouraging innovation that threatens Apple’s smartphone monopoly or the disintermediation of the iPhone. Apple continues to expand and shift the scope and categories of

anticompetitive conduct such that the cumulative anticompetitive effect of Apple's conduct is even more powerful than that of each exclusionary act standing alone.

**i. COVID-19 Tracking Apps: Apple's Exclusionary Tactics Against Independent Scientists and Developers**

87. Apple's approach to managing the distribution of COVID-19 related apps on its App Store during the pandemic highlights a broader strategy that has significant implications for competition, innovation, and scientific advancement. As the crisis unfolded, there was an urgent public need for timely and accurate health information and tracking tools. Independent scientists and small developers quickly mobilized to create applications that could serve this demand by providing novel solutions for tracking and analyzing the spread of the virus.

88. However, Apple imposed stringent criteria for which apps could be hosted on its platform, prioritizing applications from established health organizations and large institutions. This policy aimed to ensure that only institutional apps, vetted by Apple, were acceptable for public distribution, in Apple's opinion. However, the effect of this screening was problematic. First, it significantly limited the variety of available tools at a time when rapid innovation and deployment could save lives. Second, it solidified Apple's control over its app ecosystem, reinforcing its gatekeeper status at a time when digital solutions were more vital than ever. Third, it ignored a long history of independent scientists contributing to medical advancement.

89. By excluding smaller developers and independent scientists from contributing their expertise and innovative solutions, Apple not only curtailed a potentially diverse set of tools that could have aided in the pandemic response but also stifled the competitive dynamics that drive technological advancement. This exclusion extends beyond mere market dominance; it touches on the ethical implications of corporate decisions that may prioritize strategic interests or brand

goodwill over immediate public health needs. It squarely put brand goodwill above independent scientists, which amounted to corporate censorship of open science, given Apple's monopoly.

90. Apple's partnerships with large institutions for the development of COVID-19 apps further illustrate this point. While these collaborations can bring substantial resources and expertise to bear on public health challenges, they also enable Apple to maintain tight control over the narrative and technological responses to the crisis. This control can be seen as part of a broader strategy to manage its public image and cultivate government and institutional partnerships that reinforce its market position.

91. In essence, Apple's management of app submissions during the pandemic serves as a case study in how platform owners can use crises to reinforce their own market power while potentially sidelining more nimble, innovative competitors. This approach, while it may align with a company's strategic goals and a purported desire to ensure information reliability, raises significant questions about the balance between control and innovation, particularly in times of public emergency where rapid response and a diversity of solutions are crucial.

92. There exist tens of millions of individuals in the United States who do not know how to access the internet without using an iPhone device. These individuals rely upon access to the internet to perform critical commerce activity, engage in protected free speech, and obtain lifesaving medical advice and treatments. They typically access the internet through native apps, which are favored by customers by almost 90% over web browser apps. Native apps provide more functionality, some of which is critical with a COVID-19 app. GPS, altimeters, and other devices cannot be reasonably accessed without native app permission. Apple's competing COVID-19 app uses native device functionality, and independent COVID-19 apps would have been severely disadvantaged to rely on a web browser with limited-to-none SDK access. As such, Apple's monopoly over US smartphones/performance smartphones results in a *de facto* monopoly of access

to the national internet backbone, which may be termed the smartphone enhanced internet backbone and/or iPhone userbase. This collective network of hundreds of millions of smartphone devices – including their sophisticated sensors – is simply not Apple’s property. It is the property of the users, the general public, and should exist untethered and free from Apple’s control.

93. Dr. Robert Roberts, the Chief Medical Officer for Coronavirus Reporter, is a widely recognized figure in academia whose work has impacted the lives of many. Prerequisite to nearly every cardiac procedure or hospital screening for myocardial infarction (“heart attack”) is laboratory blood analysis to detect damaged cardiac muscle tissue. In the 1980s, Dr. Roberts pioneered the MBCK blood test used for two decades as a “gold standard,” and which directly laid the foundation for the current troponin lab test. Dr. Roberts earned the trust of NASA as Shuttle Cardiologist. Apple, however, deprived its userbase the benefit of Dr. Roberts’ scientific expertise and dedication towards saving lives, when the Defendant corporation improperly blocked his app in February 2020 to develop their own. Apple’s SARS-CoV-2 tracing system never reached widespread availability or implementation in the United States. Dr. Roberts’ voluntary symptom reporting app, the first of its kind, was exactly the app needed four years ago, at the onset of the pandemic. Notably, Apple blocked the entire class of independent COVID apps, even those with institutional affiliation such as Dr. Roberts, a Director of Cardiac Translational Research at University of Arizona and former CEO of Ottawa Heart Institute.

94. At the time Plaintiff Coronavirus Reporter Corporation submitted their app to the App Store, there were zero coronavirus-specific apps on the United States App Store. A keyword search for COVID or Coronavirus yielded no results.

95. Their nimble team allowed them to create the first COVID app by a world renowned researcher, and what would have been the first COVID app on the App Store. The team included NASA’s former Lead Cardiologist, as well as a front-line Emergency Room physician and a

Dartmouth trained computer scientist who personally developed apps used by half a billion users. Dr Roberts had full and final authority over all functionality of the medical app, as Chief Medical Officer of Coronavirus Reporter. The Coronavirus Reporter app was developed by a world-class medical team with specific area expertise necessary and appropriate to combine health care epidemiology research with large-scale data operations. This combined expertise would allow this startup COVID app to be first-to-market.

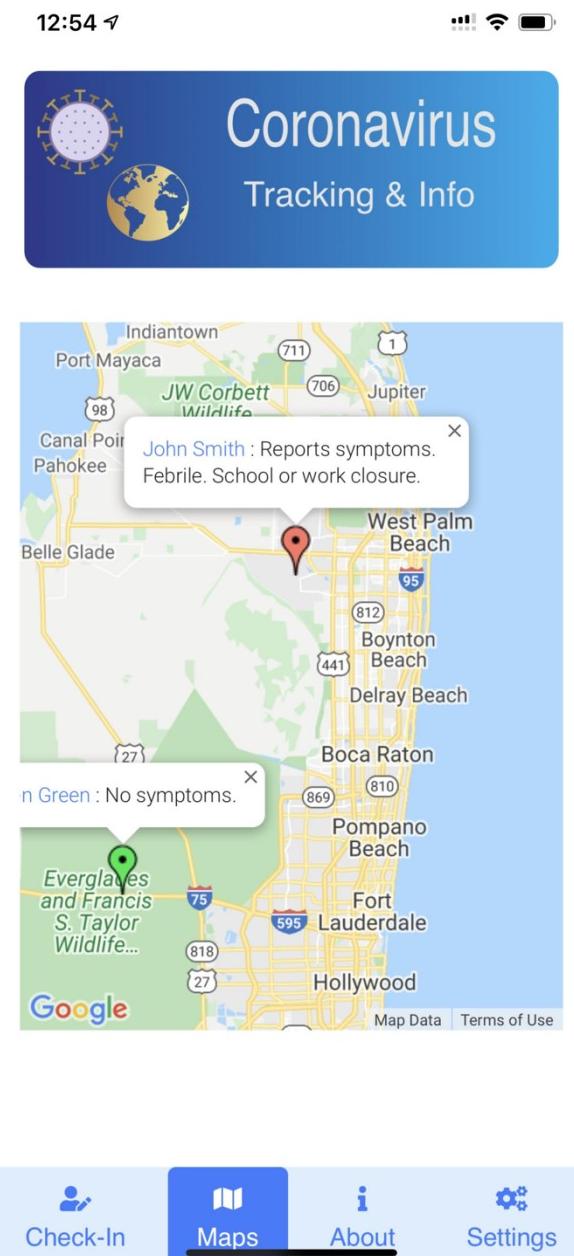
96. The Coronavirus Reporter app was developed in February 2020. The app team, and the application they developed, was ready for deployment when COVID was just arriving in the United States. The Coronavirus Reporter app, had it been allowed, would have provided useful epidemiological medical informatics data, as it provided a medium for open and free symptom and related information exchange by the general public that could then be analyzed by Roberts' team and affiliated scientists at the University of Arizona or elsewhere. Users could submit their own symptoms, lockdown status, vaccination status (in version 2.0 late 2021), vaccination details (version 3.0 late 2022) and see reports by their neighbors.

97. Despite being launched as a startup, the app had ties to academia and had every intent to share the data in a responsible and open fashion with other researchers. Apple's conduct halted this important initiative, mostly so they could be the first to manage such a network of affiliated entities.

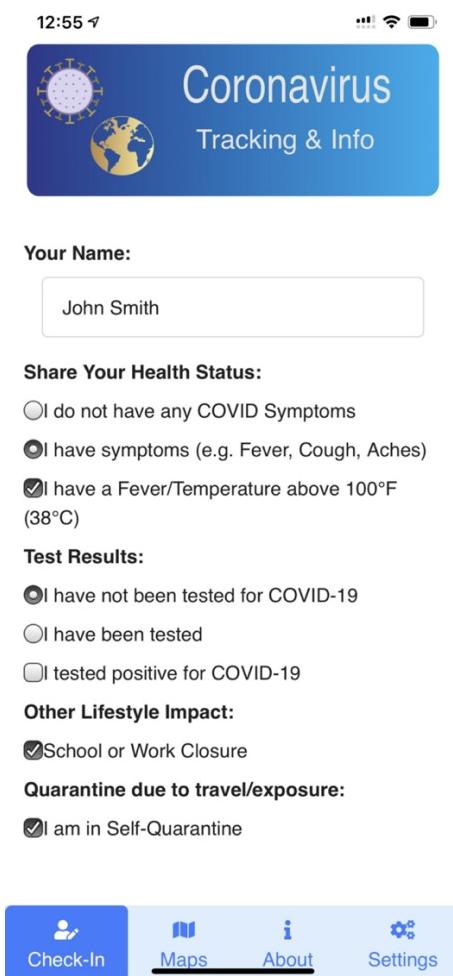
98. By offering a trustworthy and direct reporting of primary source data, Coronavirus Reporter would in all likelihood have prevented substantial morbidity and mortality. Expert analysis will be presented at jury trial showing that Apple's refusal of early apps like Plaintiff's caused no less than two-thousand deaths in the United States, according to Apple's own research. Many "Covid deniers" might have concluded differently by monitoring primary source data, as opposed to "vetted" (i.e. delayed) and politically influenced government and institutional data. For this reason,

Plaintiffs state this was an historical app, for the first time in the history of pandemics, one could watch primary-source global data, from the safety of being at home on their iPhone.

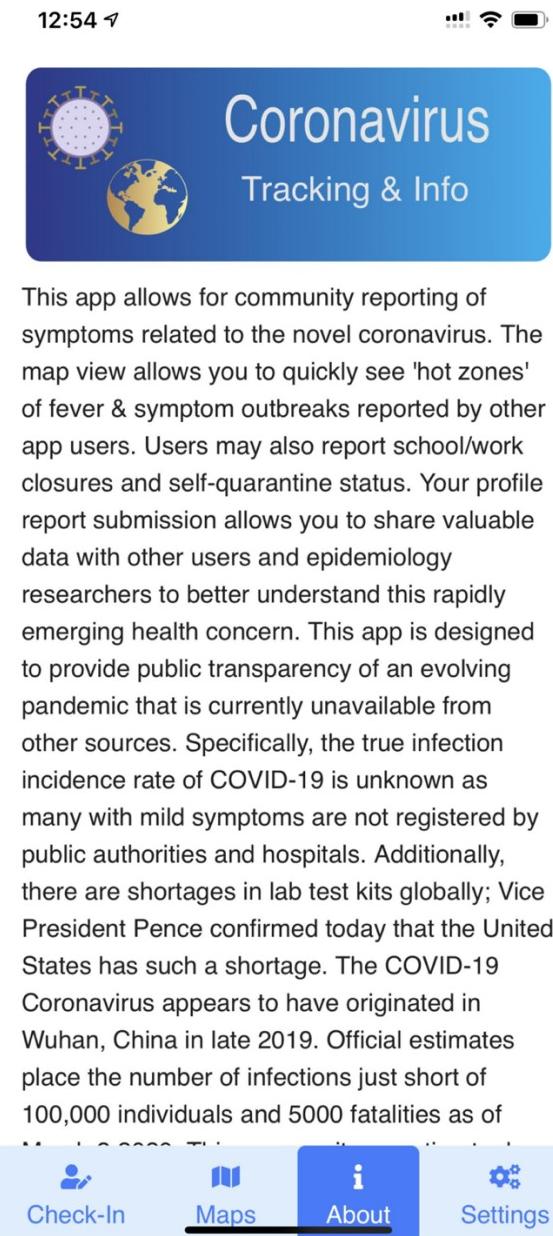
99. The app provided both informal location contact tracing, and pandemic situational awareness. This was implemented using a familiar and intuitive geolocation screen to report symptoms and view nearby outbreaks.



100. Little was known about COVID symptoms at the time, and the app was meant to develop with nimbleness and plasticity as situations emerged. In other words, the same skills CRC employed to have the first COVID app, would allow for many future-improved versions that could advance epidemiological study of the pandemic, such as vaccination self-reporting and breakthrough case data collection.



101. The app sought user reported symptoms and COVID related questionnaire items drafted by a front-line ER physician. The public demanded this information that simply wasn't yet available from mainstream medical institutions. In other words, a social media/crowdsourced app provided a useful tool for pandemic awareness in terms of real time information sharing with peers.



102. Apple rejected the Coronavirus Reporter app on March 6, 2020, knowing apps from large institutions and strategic partners were in the pipeline but not yet ready. Apple specifically strategized to prevent the Coronavirus Reporter app, and *all* COVID startup firms, from setting a precedent or amassing a user base, which could jeopardize its own pipeline and/or the first-mover advantage of desirable institutional partners of a monopolistic trust.

103. In the weeks following the initial rejection, with knowledge of CRC's correspondence, Apple broadened the App Store requirements for a COVID app from insurance companies to any healthcare company with deep-rooted credentials. Plaintiff told Apple in no uncertain words that permitting insurance companies, but not other companies, was absurd. After said communication, Apple seems to have subsequently dropped the insurance company exclusivity clause. But Apple maintained its ban on small startups, favoring large institutions. Apple defined these larger institutions as "deeply credentialled," but ignored the fact that Plaintiff had a deeply-credential medical startup.

104. Medical history is plentiful with examples of startups that revolutionized medicine. In his CNBC interview, Dr Roberts cited that "Penicillin was invented by a startup, it was a two-person effort. Thankfully Apple wasn't in a position to block the invention of penicillin." The development of penicillin required contributions from independent scientists, university teams, and government agencies, and spanned over a decade.

105. Defendant Apple denied an internal appeal to the App Review Board and permanently disallowed the app on March 26, 2020. Apple internal discussions with its own partners, at the time, were already discussing their own proprietary COVID app. Apple was also looking to form partnerships with other leading institutions to develop COVID apps, that would further cement Apple's own monopolistic trust and medial endeavors.

106. About one month after rejecting the app, Apple permitted several employees at a London teaching hospital to distribute a COVID app on the App Store that functioned nearly identically to Coronavirus Reporter. That competing app obtained the so-called first mover advantage, and is reached a peak usage of five million individuals daily.

107. Apple ultimately launched its own Covid app, a competing product to Dr. Roberts app. As of today's filing, four years after Dr. Roberts' app would have been available to 100% of the world,

Apple's app fell well short of its goals and failed to achieve substantial results in helping the pandemic. Apple's app is built-in (bundled) with iOS and hence does not show as a typical app. But nonetheless, it competes as a COVID-19 application.

108. The Apple contact tracing app generally underperformed expectations and failed to obtain a user base in the United States. Nonetheless, research by a Turing/Oxford team into the epidemiological impact of the app suggests the UK version of the app has prevented 600,000 coronavirus cases since it was launched. Coronavirus Reporter was ready months before other world-class COVID app products, and would likewise have prevented deaths in the US and other countries where the NHS/Apple app did not succeed. Deaths would have been prevented through both the informal contact tracing geolocation functionality, as well as "situational awareness" offered by the app that does not exist in the UK/Apple app. Apple's denial of the Coronavirus Reporter app resulted in unnecessary deaths.

109. We assert this is the first time in history a corporation was able to prevent a Professor of Medicine and internationally acclaimed scientist, who had saved countless lives through his MBCK discovery, from contributing to an emergency pandemic.

110. Apple did knowingly and willfully prevent the inventor of MBCK from publishing a competing COVID app. Apple knowingly blocked a competing COVID app that covered the entire US population at least 18 months before their own bundled app.

111. Defendant Apple knowing and willfully prevented Dr Roberts, inventor of a heart attack test used by millions, from assisting citizens over the internet during the early days of the pandemic, which would have been historical. History lost an important invention, or at the very least, an attempted medical informatics endeavor never before attempted in the history of pandemics. Apple knew, or should have known, that curtailing such expert assistance could have caused increased incidence and mortality due to COVID-19.

112. Blocking all startups from assisting with COVID app development likely cost lives. The flagrant Sherman Act violation seriously, dangerously, and recklessly constrained competition – here, much needed medical innovation.

113. Apple's willful denial of Dr Roberts' medical app, and other startup COVID apps, was directly assented to by key Apple leadership. These leaders willfully blocked an app that would have saved lives, according to their own research in conjunction with Oxford. In doing so, Apple disregarded long-established medical norms to an extent that was breathtaking.

114. Apple's App Review Board did not possess anyone with better COVID insight or credentials Coronavirus Reporter's Chief Medical Officer, though Apple acted as if they did have some sort of superior knowledge, confounding and conflating their market power with medical expertise. In sum, censoring Dr. Roberts, trusted by NASA for John Glenn's final mission, was an assault on science, and certainly un-American.

**B. Apple uses APIs and other critical access points in the smartphone ecosystem to control the behavior and innovation of third parties in order to insulate itself from competition**

**i. Cross-platform Videoconferencing: Apple protects its smartphone monopoly by degrading and undermining cross-platform video apps**

115. For years, Apple has restricted APIs that would allow for cross-platform videoconferencing, mirroring its strategy with messaging apps. Just as Apple undermined cross-platform messaging to maintain its dominance, it similarly stifled innovation in cross-platform video communication by delaying support for WebRTC, an open framework developed by Google for real-time communication in web browsers and mobile applications.

116. WebRTC allows developers to create applications that can perform real-time video and audio communication across different platforms without the need for additional plugins or proprietary software. This innovation had the potential to revolutionize videoconferencing by

enabling seamless communication between users on different devices and operating systems. However, Apple recognized that supporting WebRTC would diminish the exclusivity of FaceTime, its proprietary video calling service, which only functions within the Apple ecosystem.

117. As with its handling of cross-platform messaging, Apple deliberately delayed the adoption and promotion of WebRTC. This delay prevented the proliferation of cross-platform video applications that could have rivaled FaceTime and offered users more flexible communication options. During this period, users were constrained to using FaceTime with other iOS users or resorting to specific applications like Skype, which required separate installations and were less integrated.

118. The potential of WebRTC was evident early on, as it allowed for the development of video apps that did not require users to install any special software. This technology promised a more open and competitive landscape for video communication, reducing the friction for users and developers alike. However, Apple's reluctance to support WebRTC effectively stifled this potential for years, delaying the advent of innovative cross-platform video solutions.

119. One notable example of the impact of Apple's restrictive API policies is the WebCaller, a cross-platform videoconferencing utility developed by Plaintiffs GFVC and Calid Inc. WebCaller leveraged WebRTC to provide "weblinks" to video sessions, allowing anyone to join a videoconference from any platform with ease. Such cross-platform weblinks were indeed novel, and in hindsight, they were revolutionary and contributed to the fundamental to the success of Zoom and other cross-platform services which finally gained popularity during the pandemic. Yet despite innovating cross platform weblinks, WebCaller struggled to gain traction due to Apple's delayed API restrictions, in conjunction with other anticompetitive conduct.

120. Despite being one of the first cross-platform, easy-to-use WebRTC interfaces, WebCaller was suppressed in rankings for two years. App Store users were unaware that WebRTC had been

released, which permitted improved videoconferencing experience through apps like WebCaller – using weblinks to permit any internet user from joining a videoconference.

121. It is uncontested that WebCaller's innovative features were the future for videoconferencing, as competitors like Microsoft, Zoom, and Google ultimately developed similar apps during the pandemic that caused FaceTime to lose market share.

122. Apple engaged in preferential treatment of video apps, again picking and choosing who they wanted to form partnerships with. Like COVID-19 Apps, Apple knew cross-platform video was inevitable, and promoted those who benefitted them over small developers.

123. Furthermore, Apple's preferential treatment of certain apps over others is evident in its interactions with competing video app developers. For instance, Apple provided guidance and support to Chinese app developers like TikTok, which helped them grow and succeed on the App Store. In contrast, WebCaller received no such support and was buried in the App Store rankings, making it difficult for users to discover and download the app.

124. TikTok is a cross-platform video app that uses API tools to avoid users needing to download a client, like Skype. As documented in the House Report, Apple systematically helped certain Chinese firms navigate the App Store and gave them top visibility in App Store search. Despite TikTok being linked to national security issues and addictive behavior in young persons, it grew exponentially due to Apple's assistance, whereas WebCaller was ignored and suppressed by Apple. In simple terms, Apple's anticompetitive conduct changed history by bringing us TikTok, meanwhile tanking more benevolent communications tools such as WebCaller.

125. This example demonstrates Apple's careful control of App Store success stories; the general public is unaware of the years-long jockeying for new technologies like WebRTC. They simply see the apps – as puppet strings – pulled by monopolist Apple after deliberate weighing of the company's strategic interests. Meanwhile developers invest years of their lives in creative, valuable

software concepts, only to be discarded by Apple. This example is intended to advocate for the return to public interest and healthy innovation from independent developers in the app markets.

126. This deliberate stifling of competition is consistent with the findings of the House Judiciary Subcommittee on Antitrust, which highlighted Apple's practice of "Sherlocking" – where the company copies features from third-party apps and integrates them into its own products, often to the detriment of the original developers. In this case, Apple introduced FaceTime 15 with weblink features similar to those WebCaller had perfected years earlier, but only after it had secured its own strategic advantages for itself and its partners, like TikTok.

127. Apple's manipulation of the App Store rankings and its selective support for certain apps over others are clear examples of anti-competitive behavior. By controlling which apps succeed and which fail, Apple not only undermines competition but also deprives consumers of the benefits of innovation and choice. The case of WebCaller illustrates how Apple's API restrictions, ranking manipulations, and preferential treatment policies have a far-reaching impact on the market, stifling innovation and entrenching its monopoly power.

128. Greenflight had spent almost a decade working on bringing cross-platform video to the public. It first funded CALID (Calendar IDentifier) in 2014 as a cross-platform system to schedule videoconferences, with an initial focus on telehealth. The flexible and highly functional CALID platform allows scheduling of any resource entity – which could range from its focus on telehealth videoconferencing, to a birdwatching tour. Apple denied the CALID app originally because it sought to use direct credit card payments, which have a 2% transaction fee. Apple demanded CALID use their IAP system, which has a 30% inefficient transaction fee. CALID was approved after it implemented IAP purchases. CALID was forced to abandon work on the platform largely in part due to these inefficiencies. CALID was subject to ranking suppression because it competed with Apple's own apps and cronies' apps. The app was typically invisible on App Store searches.

129. Apple initially rejected the CALID app, claiming it didn't provide any "smartphone enhanced" experience, i.e., no "added functionality" in comparison to a basic website. They also rejected the app because it didn't use IAP purchases. CALID offered iOS users WebRTC videoconferencing on top of a flexible scheduling platform. However, CALID was limited to the App, as WebRTC was not available on Safari at the time.



#### ABOUT CALID

**CALID.com is an online marketplace platform that allows people to meet online, learn about each other's offerings, and subsequently book appointments directly with one another. Members who join CALID.com are able to host listings, to sign up for and schedule appointments, or both. A listing on our site is also referred to as a CALID, aka Calendar Identifier. You can think of a CALID as a social media page, but in addition to traditional social media pages which have photos and text, a CALID page also allows scheduling. Members may have as many CALID listings as they have skills to offer or things to rent. A CALID listing can exist for practically anything that can be scheduled -- including services (eg lessons, outdoor activities, expert consultations) and rentals (eg cars, houses, computers, equipments).**



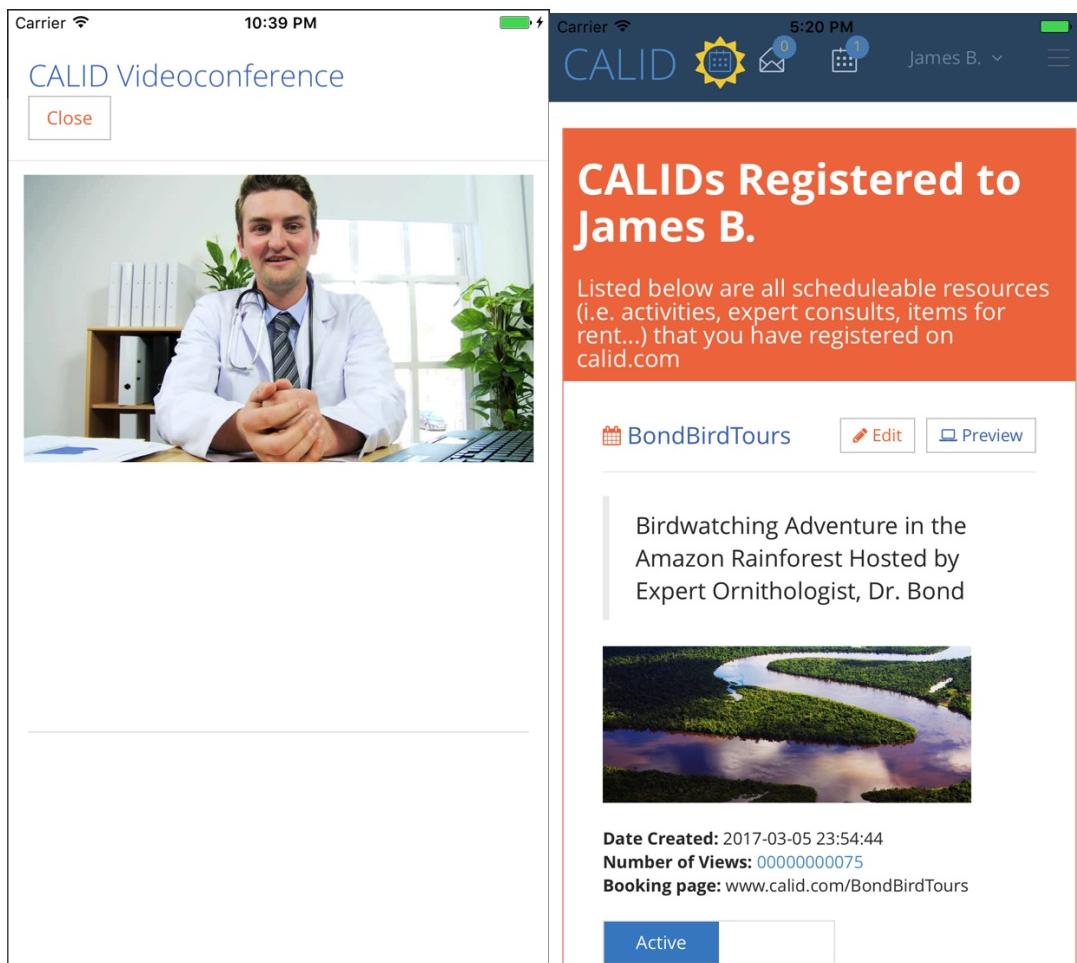
#### Explore a world of CALIDs

Discover activities and cultural excursions in your hometown - or across the globe. CALID's scheduling system works seamlessly between time zones, allowing for powerful yet easy-to-use global scheduling. CALID's listings marketplace is as diverse as its user base. Join today and contribute to our unique social platform.



## Foster eco-efficiency

CALID was founded with a vision of fostering ecological sustainability. Our Founders believed that creating a system that encouraged *sharing* would translate to reduction in unnecessary resource use. The greater the participation in CALID, the better the economies of sharing and resource savings. Videoconferencing is available as an option on any CALID reservation, further reducing unnecessary travel. We depend on members like you to create thoughtful listings to further these goals.



**CALID Videoconference**

**CALIDs Registered to James B.**

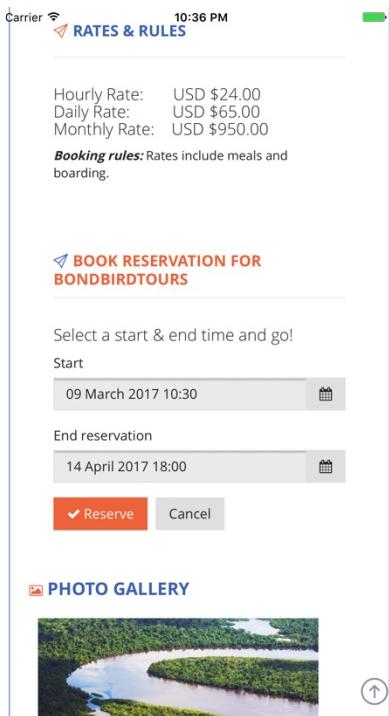
Listed below are all scheduleable resources (i.e. activities, expert consults, items for rent...) that you have registered on calid.com

**BondBirdTours**

Birdwatching Adventure in the Amazon Rainforest Hosted by Expert Ornithologist, Dr. Bond

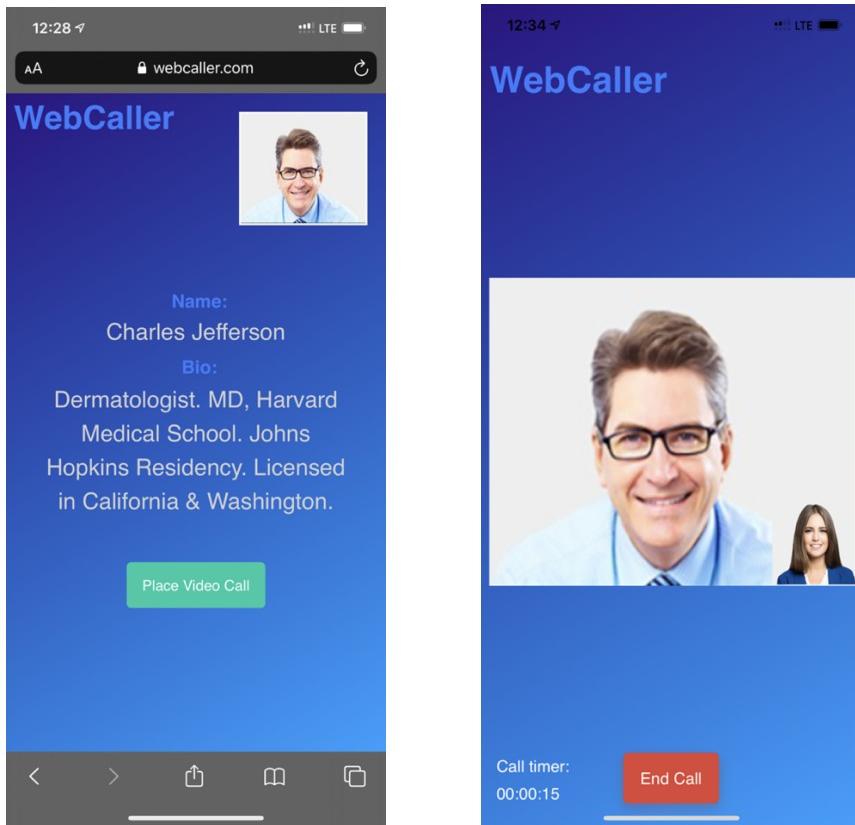
Date Created: 2017-03-05 23:54:44  
Number of Views: 0000000075  
Booking page: [www.calid.com/BondBirdTours](http://www.calid.com/BondBirdTours)

Active



130. Apple finally conceded that CALID offered something beyond a basic website, and approved CALID for distribution once IAP was added. This resulted in users having a 40% commission loss (30% to Apple, and 10% to CALID). Greenflight abandoned the platform, as it felt the 40% friction made it unethical and untenable to most practitioners.

131. Once Apple implemented WebRTC on Safari, Greenflight then invested in transforming CALID into WebCaller, a cross-platform videoconferencing utility. Unique to WebCaller, it provided weblinks to WebRTC sessions. This meant anyone could join a videoconference – on any platform – with no special add-ons or software. This was a couple years before the “zoom” revolution of the pandemic. Microsoft, Amazon, and Google use WebRTC weblinks almost exactly as specified by WebCaller, with final products that look very familiar to WebCaller, which preceded them by several years.



132. But Apple had suppressed WebCaller for two years, and it only attained a handful of downloads despite being one of the first cross-platform, easy to use WebRTC interfaces. When Apple introduced FaceTime 15, it relied upon the same exact weblink features WebCaller perfected two years earlier.

133. In summary, Apple's restrictive API policies for cross-platform videoconferencing, exemplified by its handling of WebRTC, TikTok and WebCaller, demonstrate a clear pattern of anti-competitive behavior. By delaying support for WebRTC and selectively suppressing competing apps, Apple has maintained its dominance in the video communication market at the expense of innovation and consumer choice. This conduct not only mirrors its approach to cross-platform messaging but also highlights the broader implications of its monopolistic practices for the technology industry and beyond.

134. To Apple, complying with Sherman Act's civil and criminal statutes is apparently a laughing matter. In 2022, Apple's CEO Tim Cook was asked whether Apple would fix iPhone-to-Android messaging. "It's tough," the questioner implored Mr. Cook, "not to make it personal but I can't send my mom certain videos." Mr. Cook's response? "Buy your mom an iPhone."

**C. Apple's "moat" around its smartphone monopoly is wide and deep: it uses a similar playbook to maintain its monopoly through many other products and services**

135. The exclusionary and anticompetitive acts described above are part of Apple's ongoing course of conduct to build and maintain its smartphone monopoly. They are hardly exhaustive. Rather, they exemplify the innovation Apple has stifled and Apple's overall strategy of using its power over app distribution and app creation to selectively block threatening innovations.

136. Apple has deployed a similar playbook for a much broader range of third-party apps and services as well, many of which present technologies that function as middleware, facilitate switching, reduce the need for expensive hardware, or disintermediate Apple's iPhone by enabling the development of cross-platform technologies. For instance, Apple has undermined third-party location trackable devices that fully function across platforms. Apple has impaired third-party, cross-platform video communications apps while steering users to its own video communication app, FaceTime. Apple has limited the capabilities of third-party iOS web browsers, including by requiring that they use Apple's browser engine, WebKit. Protocols that Apple has placed around new "eSIM" technology may introduce additional frictions for any user who seeks to transition from an iPhone to a different phone while maintaining the same phone number. Apple has impeded cross-platform cloud storage apps in order to steer iPhone users into iCloud, making data transfer between different devices more difficult. Apple uses restrictions in sales channels to impede the sale and distribution of rival smartphones. And Apple has worsened its users' experience by making it

difficult for iPhone users to use superior voice and AI assistants and steering users to use Siri as a voice assistant.

137. Ultimately, the strategies Apple has employed to date are not the only ones Apple can use to achieve its anticompetitive and lucrative ends. As technology evolves, Apple continues to evolve and shift its anticompetitive behavior to protect its monopoly power.

138. For example, in recent years, Apple has increasingly moved into offering its own subscription services, including news, games, video, music, cloud storage, and fitness subscriptions that could be used to keep users tethered to the platform. These subscription services and other ancillary fees are a significant part of Apple's net revenue. These subscription services can also increase switching costs among iPhone users. If an Apple user can only access their subscription service on an iPhone, they may experience significant costs, time, lost content, and other frictions if they attempt to switch to a non-Apple smartphone or subscription service.

139. These subscription services can also increase Apple's power over content creators and newspapers, among others, by exerting control over how audiences access their work, decreasing traffic to their websites and apps, and positioning Apple as the middleman or tollbooth operator in the relationship between creators and users. In so doing, Apple takes on outsize importance and control in the creative economy, which may diminish incentives to fund, make, and distribute artistic expression.

140. In addition, when one road is closed to Apple, Apple has demonstrated its ability to find new roads to the same or worse ends. For example, Apple was recently ordered to stop blocking link-outs by third parties to their websites where users could buy the third party's product cheaper. In response, Apple reportedly allowed link-outs to websites but now charges for purchases made on the web even if they are not an immediate result of a click from a link in a native iPhone app. As discussed in the Global Antitrust Proceeding section, this conduct evidences that Apple willfully

violates antitrust enforcement court orders, by charging for its notarization stamps and services monopoly. Apple could not enforce such link-out charges, but for the anticompetitive DPLA and hardware notarization algorithms.

141. Apple has also attempted to undermine cross-platform technologies like digital car keys in ways that benefit Apple but harm consumers. For example, Apple has required developers to add digital keys developed for their own apps to Apple Wallet as well. The default status of Apple Wallet steers users to the Apple Wallet rather than allowing third parties to present digital car keys only in their own cross-platform app, increasing dependence on Apple and the iPhone whenever they use their car. At the same time, it decreases the incentives of automakers to innovate because automakers are forced to share data with Apple and prevented from differentiating themselves as they could absent Apple's conduct.

142. Apple's threatened dominance over the automotive industry goes well beyond the Apple Wallet and Apple's demands on car makers to allow innovative products and services on the iPhone. Apple's smartphone dominance extends to CarPlay, an Apple infotainment system that enables a car's central display to serve as a display for the iPhone and enables the driver to use the iPhone to control maps and entertainment in the car. Like the smartphone market, infotainment systems are increasingly considered must-have capabilities in newer vehicles. After leveraging its smartphone dominance to car infotainment systems, Apple has told automakers that the next generation of Apple CarPlay will take over all of the screens, sensors, and gauges in a car, forcing users to experience driving as an iPhone-centric experience if they want to use any of the features provided by CarPlay. Here too, Apple leverages its iPhone user base to exert more power over its trading partners, including American carmakers, in future innovation. By applying the same playbook of restrictions to CarPlay, Apple further locks-in the power of the iPhone by preventing

the development of other disintermediating technologies that interoperate with the phone but reside off device.

## VII. Anticompetitive Effects

### A. Apple's conduct harms the competitive process

143. As described above, Apple protects its monopoly power in smartphones and performance smartphones by using its control over app distribution and app creation to suppress or delay apps, innovations, and technologies that would reduce user switching costs or simply allow users to discover, purchase, and use their own apps and content without having to rely on Apple. As a result, Apple faces less competition from rival smartphones and less competitive pressure from innovative, cross-platform technologies not because Apple makes its own products better but because it makes other products worse. With the benefit of less competition, Apple extracts extraordinary profits and regulates innovation to serve its interests. This leaves all smartphone users worse off, with fewer choices, higher prices and fees, lower quality smartphones, apps, and accessories, and less innovation from Apple and others. Left unchallenged, Apple will continue to use and strengthen its smartphone monopoly to dictate how companies can create and distribute apps in the future so that they cannot threaten Apple's smartphone monopolies.

144. Apple's conduct has resulted in less choice for smartphone users. Today, only two companies (Google and Samsung) remain as meaningful competitors to Apple in the premium smartphone market.

145. Even when users consider these alternatives, Apple's conduct has increased the technical, behavioral, monetary, and other costs of switching from an iPhone to an alternative smartphone. This undermines competition and entrenches Apple's monopoly power.

146. For example, according to user surveys, one of the biggest reasons iPhone users do not switch to rival smartphones today is to avoid the problems Apple has created for cross-platform

messaging. Likewise, Apple exercised its control over app distribution and app creation to impede the development and growth of super apps, depriving users of technology that would have facilitated switching by decreasing user's dependence on Apple and the iPhone. Apple took a similar approach to cloud streaming apps, delaying or suppressing technology that would have made it easier for users to switch to cheaper smartphones. Apple also used its control over app creation, including its control over critical APIs, to impose technical and contractual restrictions on messaging apps, third-party smartwatches, and digital wallets, undermining cross-platform technologies that would have helped users overcome switching costs and friction and ultimately increased smartphone competition.

147. Apple's conduct has delayed or suppressed the emergence of cross-platform technologies that would put competitive pressure on Apple's ability to extract extraordinary profits from users and developers. For example, if developers could distribute their programs through super apps or cloud streaming apps, rather than the App Store, it would put competitive pressure on Apple's ability to control app distribution and app creation as well as the taxes Apple imposes on developers who want to distribute apps to iPhone users. Similarly, third-party digital wallets, or other apps with tap-to-pay functionality, would benefit users and developers by putting more competitive pressure on Apple as well. For example, digital wallets could eventually provide developers an alternative way to process payments and manage customer relationships, forcing Apple to compete more aggressively by lowering fees and improving quality, which would ultimately benefit users. Instead, Apple continues to exert its power over customers and financial institutions when users pay for something with their phone—in the App Store, in an app, or increasingly in the physical world with tap-to-pay.

148. Apple's conduct has harmed users in other ways. For example, third-party digital wallets would reduce Apple's ability to charge banks high fees when users make payments using Apple

Wallet, which ultimately cost consumers through higher prices or other reductions in quality. Alternative digital wallets could also provide smartphone users better rewards, e.g., cash back, as well as a more private, secure payment experience from a user's preferred financial institution rather than being forced to go through Apple. But these tap-to-pay digital wallet products and services do not exist today because of Apple.

149. Apple's conduct has made its own products worse, sacrificing the short-term profits Apple could earn from improving the iPhone in order to preserve the long-term value of maintaining its monopoly. In a competitive market, Apple would compete aggressively to support the development of popular apps and accessories for iPhone users, which would in turn make iPhones more attractive to users and more valuable. But Apple takes steps to delay or suppress cross-platform technologies that it recognizes would be popular with users, such as super apps and cloud streaming apps, because of the threat they pose to Apple's smartphone monopolies. As a result, several developers have abandoned plans to develop super apps and cloud-based gaming apps even after making substantial investments in bringing them to market. Apple's conduct may have also slowed the development of innovative, high-compute apps related to education, artificial intelligence, and productivity as well. Apple has also impeded innovation by third-party smartwatches such that manufacturers have limited the functionality of their smartwatches for iPhone users, suspended support for iPhone compatibility because of Apple's restrictions, or canceled development of cross-platform smartwatches altogether. At least one company's canceled smartwatch formed part of its overall wearables strategy, including future development of virtual-reality technology. Similarly, Apple degrades third-party messaging apps, even though it makes cross-platform messaging less private and less secure for iPhone users, because doing so raises switching costs.

150. Apple's conduct has harmed other smartphone users, too. Because of the resources and risks required to maintain different features across different smartphones, many potential super app, mini

program, and other developers do not implement features prohibited by Apple even on other smartphones. For example, prospective digital wallet providers, including U.S. banks, have abandoned the development of digital-wallet apps for either Apple or other smartphones. Another company decided not to offer users an innovative digital car key in part because Apple required that company to add any features related to the key into Apple Wallet rather than allowing that company to put its key solely in its own app. Other developers have shrunk, shuttered, or abandoned plans to launch super apps, cloud-streamed gaming apps, smartwatches, and other apps. As a result, all smartphone users enjoy lower quality smartphones, less innovation, and less choice.

151. Apple's documents and conduct show that Apple is motivated by the anticompetitive purpose of building or maintaining monopoly power in the relevant markets.

152. For example, Apple sacrificed substantial revenues it could have earned from super apps, mini programs, cloud streaming apps, and other third-party apps and accessories. In particular, mobile gaming already accounts for a large and growing portion of Apple's revenue. Popular cloud streamed gaming apps would offer iPhone users access to popular services (including games) and in turn generate significant revenue for Apple through subscriptions and in-app purchases.

153. Instead, Apple preferred the long-term benefit of reduced smartphone competition to the revenue it would generate from cloud gaming, super apps, and mini programs or the quality (and consumer demand) increase that would flow from this innovation. Apple has also used its control over app distribution and app creation to selectively undermine cross-platform technologies, not because this helps protect users but because it helps protect Apple.

154. The harms to smartphone competition caused by Apple's conduct are amplified by Apple's decision to grant itself exclusive distribution rights to iPhone users through the Apple App Store. If Apple allowed users to access apps in other ways, users could choose an app store that did not restrict super apps or mini programs, even if Apple ran its App Store the same way it does today.

Apple does not allow that choice, however, because if it did developers could write their programs for any smartphone rather than specifically for iOS, just as internet browsers and Apple's QuickTime allowed developers to write programs that worked on a variety of operating systems not just Windows. That would lower users' switching costs and reduce users' and developers' dependence on Apple and the iPhone.

155. Apple's smartphone monopoly gives it many levers to maintain its power even in the face of interventions focused on eliminating or disciplining specific anticompetitive practices. This is because Apple's iPhone monopoly, secured by its anticompetitive conduct, grants it the power to set the rules by which most smartphone users buy digital and hardware products, and by which developers are allowed to sell these same products to users. If Apple is forced to change some of these rules, it has the power to adopt new rules, restrictions, or features that reinforce Apple's monopoly and harm competition in other ways. For example, Apple has stated plans to adopt RCS due to market and international regulatory pressure. But Apple continues to contractually restrict third parties from accessing other APIs and features that would enable cross-platform messaging apps. In another instance, Apple was enjoined from enforcing certain anti-steering provisions in its agreements with developers. In response, Apple simply created a different set of onerous restrictions on app developers to achieve a similar result. In other cases, Apple has used its control over app distribution to force companies to comply with Apple's policies that may contradict local laws by delaying the review of the offending companies' apps.

#### **B. Apple has every incentive to use its monopoly playbook in the future**

156. Apple's conduct does not just impact the past and present but poses significant risk to the development of new innovations. Apple may use its smartphone monopoly playbook to acquire or maintain power over next-frontier devices and technologies. As Apple grows its dominance, Apple

may continue delaying or stifling the innovations of cross-platform companies, in order to lock users into Apple devices.

157. Apple has countless products and services—AirPods, iPads, Music, Apple TV, photos, maps, iTunes, CarPlay, AirDrop, Apple Card, and Cash. These provide future avenues for Apple to engage in anticompetitive conduct and the ability to circumvent remedies. Appropriate forward-looking remedies are necessary to ensure that Apple cannot use these products and services to further entrench its monopoly power.

158. Apple's conduct extends beyond just monopoly profits and even affects the flow of speech. For example, Apple is rapidly expanding its role as a TV and movie producer and has exercised that role to control content.

159. Apple has also attempted to use its monopoly to collect user data and stifle innovation in the automotive industry by, among other things, impeding the development of digital key technologies by requiring them to be offered in Apple's proprietary wallet product and creating new single points of power over emerging uses of the iPhone. These acts further reinforce Apple's power in the iPhone by locking in Apple's services and excluding other alternative technologies that have the potential to disintermediate Apple's iPhone.

160. Finally, Apple's monopolization of smartphone markets gives it tremendous power over the lives of millions of Americans. Today, Apple uses that power to undermine rival smartphones, suppress innovative technologies, and stymie consumer choice. Tomorrow, Apple may use its power to force its own users (and their data) to become its next profitable product.

### **C. Antitrust Injury Experienced by Class Member Developers of Free Apps**

161. Plaintiffs and class members assert direct and quantifiable antitrust injuries as a result of Apple Inc.'s restrictive practices, which have not only stifled innovation and competition within the

iPhone/Smartphone app development sectors but have also led to direct economic harm to Plaintiffs and similarly situated developers. This section outlines the specific nature of these injuries.

162. Direct Economic Harm: Plaintiffs and class members have incurred significant development costs under the expectation of a fair and competitive marketplace. Apple's monopolistic control and exclusionary practices, including self-preferencing of Apple products, the imposition of notarization requirements and the prohibition of alternative app distribution channels, have directly prevented Plaintiffs from realizing returns on their investments. This direct economic harm is quantifiable in terms of development expenditures that could not be recouped due to Apple's anticompetitive barriers.

163. Lost Revenue and Market Opportunity: By effectively barring Plaintiffs' and class member apps from the App Store or subjecting them to suppressive ranking algorithms, Apple has deprived Plaintiffs of access to a critical mass of potential users, directly resulting in lost revenue and market opportunity. These losses are a direct consequence of Apple's unlawful conduct, quantifiable through economic analysis comparing potential earnings in a competitive market versus the constrained environment created by Apple.

164. Innovation Stifling: Apple's practices have not only caused immediate economic harm but have also stifled innovation by creating insurmountable barriers for smaller developers. This has led to a homogenization of available apps, reducing consumer choice and inhibiting the introduction of novel and potentially disruptive technologies into the marketplace.

165. Consumer Harm as Proxy for Developer Injury: The reduction in consumer choice resulting from Apple's monopolistic control harms developers by depressing the overall demand for apps. Consumers lowered expectation from App Store inefficiencies constitutes an antitrust injury for developers, too, as it reflects a market manipulation that disadvantages developers who are prepared to offer more innovative or cost-effective alternatives.

166. The injuries suffered by Plaintiffs and class members as a result of Apple's anticompetitive conduct are thus both direct and consequential, with the class representing a sizeable economic antitrust injury, in and of itself.

### **VIII. Privacy, Security, and Other Alleged Countervailing Factors Do Not Justify Apple's Anticompetitive Conduct**

167. There are no valid, procompetitive benefits of Apple's exclusionary conduct that would outweigh its anticompetitive effects. Apple's moat building has not resulted in lower prices, higher output, improved innovation, or a better user experience for smartphone users.

168. Apple markets itself on the basis of privacy and security to differentiate itself from what competition is left in the smartphone market. But this does not justify Apple's monopolistic and anticompetitive conduct. Apple imposes contractual restraints on app creation and distribution, imposes hefty fees on many types of smartphone interactions, and conditionally restricts API access on its smartphone platform simply because it can. There are limited if any competitive constraints on this conduct. As a point of comparison, Apple does not engage in such conduct on its Mac laptops and computers. It gives developers the freedom to distribute software directly to consumers on Mac without going through an Apple-controlled app store and without paying Apple app store fees. This still provides a safe and secure experience for Mac users, demonstrating that Apple's control over app distribution and creation on the iPhone is substantially more restrictive than necessary to protect user privacy and security.

169. In fact, many alternative technologies that Apple's conduct suppresses would enhance user security and privacy. For example, Apple's conduct targeting digital wallets forces users to share information with Apple even if they would prefer to share that information solely with their bank, medical provider, or other trusted third party. In particular, when an iPhone user provisions a credit or debit card into Apple Wallet, Apple intervenes in a process that could otherwise occur directly

between the user and card issuer introducing an additional point of failure for privacy and security. Likewise, super apps or alternative app stores could offer users and their families a more curated selection of apps that better protect user privacy and security. Indeed, Apple allows enterprise and public sector customers to offer more curated app stores on employee iPhones because it better protects privacy and security.

170. Apple is also willing to make the iPhone less secure and less private if that helps maintain its monopoly power. For example, text messages sent from iPhones to Android phones are unencrypted as a result of Apple's conduct. If Apple wanted to, Apple could allow iPhone users to send encrypted messages to Android users while still using iMessage on their iPhone, which would instantly improve the privacy and security of iPhone and other smartphone users.

171. Similarly, Apple is willing to sacrifice user privacy and security in other ways so long as doing so benefits Apple. For example, Apple allows developers to distribute apps through its App Store that collect vast amounts of personal and sensitive data about users—including children—at the expense of its users' privacy and security. Apple also enters agreements to share in the revenue generated from advertising that relies on harvesting users' personal data. For example, Apple accepts massive payments from Google to set its search engine as the default in the Safari web browser even though Apple recognizes that other search engines better protect user privacy.

172. Finally, Apple selectively enforces its rules and contractual restrictions for app distribution and app creation. For example, when it benefits Apple to do so, Apple permits developers to introduce mini programs, stream content from the cloud, use virtual currency, and receive special permissions or access APIs not automatically available to everyone.

173. Ultimately, Apple chooses to make the iPhone private and secure when doing so benefits Apple; Apple chooses alternative courses when those courses help Apple protect its monopoly

power. Apple's conduct underscores the pretextual nature of any claim that Apple's conduct is justified by protecting user privacy or security.

## **IX. The Smartphone Industry**

### **A. Background**

174. Mobile phones are portable devices that enable communications over radio frequencies instead of telephone landlines. These signals are transmitted by equipment covering distinct geographic areas, or “cells,” which is why mobile phones were called cell phones. The first commercial cell phones became available in the 1980s. Since then, improvements in both cell phone components and wireless technology have made it possible to transfer large volumes of data around the globe in a short period. As a result, mobile phones began to offer a wider array of features and the adoption of mobile phones dramatically increased. Today, nearly all American adults own a mobile phone.

175. Smartphones combine the functionality of a traditional mobile phone with advanced hardware and software components. Smartphones not only make phone calls, but allow users to listen to music, send text messages, take pictures, play games, access software for work, manage their finances, and browse the internet. Consumers choose between smartphones based, in part, on their functionality. Today, smartphone functionality is driven in large part, though not exclusively, by a combination of hardware and software components. Thus, in a competitive market, smartphone manufacturers would compete and innovate to provide the best functionality.

176. Although consumers could replace some smartphone functionality with separate devices such as by always carrying a camera and laptop, they generally prefer to access this combination of functionality as part of a single device. Thus, phones with some but not all of these features are not reasonable substitutes for smartphones. For example, a Canon or Nikon camera is not a substitute

for an Apple or Samsung smartphone notwithstanding that both these products are capable of taking digital pictures.

## **B. Smartphone Hardware**

177. A smartphone's hardware includes the frame and screen. Higher performing smartphones are typically constructed from better materials like glass and metal instead of plastic, manufactured to higher standards that make them more durable (e.g., water and dust proof), and have higher quality displays.

178. A smartphone's hardware also includes the semiconductor chipsets that run the smartphone: central processing of software instructions, graphics, video, display, memory, data storage, and connection to wireless networks. Chipsets that offer superior performance—faster processing and network connections, better graphics, more storage—are costly. As a result, smartphone manufacturers typically include them only in more expensive performance smartphones.

179. Smartphone hardware includes other important components like cameras, and position and motion sensors. Performance smartphones typically have higher quality cameras, better battery life, wireless charging, and advanced biometrics such as face scanning.

180. Smartphones also contain several types of antennas that allow the phone to communicate with other smartphones, accessories, or other devices using standard communication protocols such as Wi-Fi, Bluetooth, and Near-Field Communications (NFC).

181. Wi-Fi is a wireless networking technology that uses radio waves to provide wireless high-speed Internet access through mobile devices, computers, printers, and other equipment. "Wi-Fi," in particular, refers to IEEE 802.11 standards that define the protocols that enable communications with current Wi-Fi-enabled wireless devices such as wireless routers and access points.

182. Bluetooth is a wireless standard that allows smartphones to use shortwave radios to communicate with accessories like headphones and smartwatches. An industry-wide Bluetooth

standard specifies technological requirements to ensure that all Bluetooth devices can recognize and interact with each other. A typical Bluetooth signal has a range of about 30 feet.

183. Near Field Communication (NFC) allows smartphones to interact with NFC- enabled devices like a credit card terminal at a coffee shop. NFC relies on short- range wireless technologies, including radio signals, to communicate and share information. To operate, two NFC- enabled devices must typically be within four centimeters or less of one another.

184. Three device manufacturers, Apple, Samsung, and Google, account for approximately 94 percent of all smartphones by revenue in the United States. Apple and Samsung alone account for approximately 90 percent of all smartphone revenues in the United States.

185. Cloud-based technologies are run using hardware and software in remote computing centers (“the cloud”) rather than by hardware and software on a smartphone. The user experiences the technology on the phone but the complex computing that generates the rich experience and that executes the user’s commands happens in the cloud. Thus, cloud apps can deliver rich experiences on smartphones with less capable hardware than iPhones currently contain.

### **C. Smartphone Operating Systems, Applications, and Other Software**

186. In addition to hardware, smartphones include various software components that make a smartphone more attractive to users.

187. The most important software component is a smartphone’s operating system, the foundational software that manages both the hardware and other software programs on the device. All iPhones are preloaded (bundled) with Apple’s proprietary, exclusive iPhone operating system called iOS. The only other significant mobile operating system in the United States is Google’s Android, which works with smartphones manufactured by Samsung, Google, Motorola, and smaller players. Software applications, known as “apps,” are programs that perform specific tasks at the smartphone user’s request, such as sending messages, playing music, or web browsing. Apps

depend on a smartphone's operating system to function. For example, to make a video call, apps must communicate with a smartphone's operating system to access various hardware components on the phone, such as the camera, microphone, and speaker. Apps communicate with a smartphone's operating system through application programming interfaces (APIs).

188. Apps that work with a particular smartphone operating system are called native apps. Thus, Apple's native iOS apps work with iPhone and native Android apps work with Android smartphones.

189. Most app developers do not view Android as a substitute for iOS or iOS as a substitute for Android. The overwhelming majority of users choose a single phone and do not "multi-home" by carrying an Android phone and the iPhone at the same time. Thus, a developer cannot reach iPhone users on Android or Android users on iPhones. Due to the lack of user multi-homing, most developers create native apps for both iOS and Android to reach the greatest number of smartphone users. For example, a food delivery or ride-sharing app cannot develop an app just for Android phones or just for the iPhone. Developing for both platforms is often necessary for developers to reach the scale they need to be viable.

190. It is also important to develop apps for the iPhone and other smartphone platforms because most apps are increasingly "social" in nature and require users on one platform to reach users on the other. For example, the developer of a dating app must enable its users on iPhones to meet users on Android and vice-versa. A money-sharing app must enable users on Android devices to send money to users on iPhones and vice versa.

191. App developers typically provide a similar user experience for native apps on iPhones and Android smartphones to minimize the resources and risks of maintaining different features across different smartphones. Even so, developers must program native apps to work with a specific

operating system and so they do not always interoperate or synchronize across different operating systems.

192. Middleware is software that provides similar APIs and functionality across a diverse set of operating systems and devices. This allows developers to create cross-platform applications without having to write separate code for individual operating systems or devices because developers can rely on the APIs exposed by the middleware rather than APIs that only work on specific operating systems or devices. Apple has long understood how middleware can help promote competition and its myriad benefits, including increased innovation and output, by increasing scale and interoperability. As Apple's then-Senior Vice President of Software Engineering testified during the government's landmark monopolization case in *United States v. Microsoft*: "Because we have created QuickTime for both Windows and Macintosh computers, developers can write a single version of a content product that will run on both Macintosh and Windows, without the additional expense of 'porting' the product to different operating systems." In the context of smartphones, examples of middleware include internet browsers, internet or cloud-based apps, super apps, and smartwatches, among other products and services. While not meeting the technical definition of middleware, certain other products and services may nonetheless have the same economic impact as middleware, such as eliminating the added expense of porting a product or experience across hardware or operating systems. For the purposes of this complaint middleware refers to both technical middleware and to products and services that, while not technically middleware, have the same economic effect.

#### **D. Relevant Markets**

193. All smartphones compete against each other in a broad relevant market. But industry participants, including Apple, assess competition among smartphones in narrower markets that are best understood as submarkets of the larger all-smartphone market. Because Apple chooses not to

compete to sell new smartphones in the entry-level tier, the most relevant market to assess its conduct is a narrower submarket that excludes this tier. Regardless of how the market is drawn, however, Apple's conduct is unlawful.

i. **Performance smartphones are a relevant product market**

194. Performance smartphones are a narrower relevant product market within the broader smartphone market. This narrower market includes those smartphones that compete with most iPhones and excludes the lowest-end smartphones, which industry participants sometimes refer to as "entry-level" smartphones.

195. Industry participants recognize performance smartphones as distinct and frequently group smartphones into tiers that include entry-level smartphones and higher tiers such as "premium" or "flagship."

196. Apple has also long recognized a distinction between these higher-end smartphones and lower-end, entry-level smartphones. Apple's own documents indicate it does not view entry-level smartphones as competing with the iPhone and other performance smartphones.

197. Performance smartphones have distinct characteristics and uses as compared to other smartphones. For example, entry-level smartphones are generally made with lower-quality materials and are less durable (e.g., plastic instead of metal and glass). They have lower-performance components such as slower processors and lower-capacity storage, which prevent users from running more intensive applications or storing large volumes of pictures and data on the device. Entry-level smartphones often lack features such as an NFC antenna that allows consumers to use their phone to make payments or access passes for public transit.

198. Consumers typically purchase performance smartphones under different terms than entry-level smartphones. Consumers generally use entry-level smartphones along with pre-paid service plans. By contrast, consumers usually purchase performance smartphones for use with post-paid

service plans that include promotional discounts to consumers who purchase performance smartphones.

199. Because of these differences, among others, between entry-level smartphones and performance smartphones, entry-level smartphones are not reasonable substitutes for performance smartphones.

200. Moreover, competition from non-performance smartphones is not sufficient today to prevent Apple from exercising monopoly power in the performance smartphone market.

**ii. Smartphones are a broader relevant product market**

201. Smartphones are a relevant product market. Smartphones are distinct from phones that offer less capable hardware and software options than smartphones. These other phones, sometimes called “feature phones,” may offer basic web browsing in addition to calling and messaging options, but do not offer the breadth of access to the internet or third-party apps as smartphones. Similarly, these phones often have lower-quality hardware, such as poorer displays, less capable cameras, and rely on physical keyboards instead of smartphone touch screens. Thus, these phones are not reasonable substitutes for smartphones.

202. Smartphones are also distinct from other portable devices, such as tablets, smartwatches, and laptop computers. These devices lack the combination of function, size, and portability that consumers rely on in a smartphone, even if they offer some similar capabilities. Thus, none of these other products are reasonable substitutes for smartphones.

203. Apple, other participants in the market, and the public recognize that smartphones are distinct from feature phones and other portable devices.

204. Competition from feature phones, or other alternatives, is not sufficient to prevent Apple from exercising monopoly power in the smartphone market.

**iii. App Distribution Services (“App Stores”) is a relevant market**

205. There exists a relevant market for US Smartphone App Distribution Services, which sell or otherwise provide apps for installation to users in the aforementioned US smartphone market. Hence it may be considered a related, downstream, or after market to the [Performance] Smartphone foremarkets, based upon a jury’s *Brown Shoe* fact-finding.

206. To benefit fully from their smartphone, owners install apps written by third-party developers, which provide added functionality. The apps may be work utilities such as word processors, banking tools, references like encyclopedias, games, home alarm systems, health monitoring systems, and so forth.

207. Within this market, the Apple App Store handles over 80% of smartphone software sales and distribution as measured by profit. Alternatives to the App Store are Google Play, Microsoft Store, and some third-party jailbreaking products like Cydia. Additionally, developers like Plaintiffs can easily offer software distribution websites that would compete as an App Distribution Service, but for Notary Stamp requirements. Apps could even be emailed to consumers from developers, which would be a readily available form of distribution service in a non-constrained market.

208. Traditional brick-and-mortar software stores were the primary App Distribution Service for All Historic Computing Platforms until the advent of the Smartphone. Brick-and-mortar stores could be a part of this relevant market, except Apple’s notarization requirement disallows them. This market is plead for digital app stores, but a jury, engaged in *Brown Shoe* fact-finding, may take into consideration historical brick-and-mortar stores, and may conclude they are, or should be, a part of this market.

209. An app distribution service (whether for smartphones, or all historic computing platforms) typically has a retail store front, and could have an institutional purchasing side that buys from software developers. In this sense, it could take on the role of publisher, akin to the book industry.

210. Typically, consumers do not pay for Smartphone App Distribution Services directly, it is a zero-priced service product where consumer's choice of service depends upon factors like quality of selection and convenience, rather than price. The App Store is installed free on all iPhone smartphone devices, and Google Play is installed free on all Android phones. Hence there is no traditional elasticity of demand for these service-products, because there is no price delta denominator. A jury may even find this is to be a single-brand downstream market, as they did in *Epic v. Google*. For initial pleading purposes, and because Apple holds an 80% share, it suffices to plead that the alleged relevant market is for all US smartphone app distribution services.

211. Competitors in this market earn profit by charging a commission on software sales or monetizing user attention, or potentially, payments from developers to promote their apps. An inefficiency in this market, i.e. where there was one monopoly seller of apps, or monopsonist buyer of institutional apps, could create a dangerous scenario where consumers pay supra-competitive rates (such as 30%) on a bottlenecked offering of software.

212. US Smartphone App Distribution Services importantly distribute free apps, which consumers use to carry out daily tasks of life. An inefficiency in this market could create a dangerous scenario whereby a monopolist/monopsonist could censor and control essential life tasks through restrictive conduct. Smartphone App Distribution Services may be referred to as "app stores," "software stores," "app distribution points," and "retail side of app market" for contextual clarity.

**iv. There is a relevant Sherman market for US Smartphone Apps ("software")**

213. To be useful to consumers, a smartphone must be able to run software applications, or "apps." The app market may be considered related and/or downstream to the US [performance] smartphone foremarket. Apps let users perform most of the functions associated with mobile

devices—tasks like navigation, web browsing, ordering groceries, playing games, and communicating through email and text messaging. A mobile OS facilitates the use of apps through code, such as application programming interfaces (“APIs”), and SDKs (“software development kits”) which app developers use to create apps that are compatible with the OS.

214. Apps may be free or have a non-zero price to consumers, but even a free app has a wholesale valuation. Analogously, every film has a price sold to a film studio. A made-for-TV show, free through ad sponsorship or unlimited streaming agreements, has a price paid to its creators by the TV network or streaming service. Likewise, an author is paid for book rights by a publishing house. Apps are thereby priced by either their cost to consumer, or their total net valuation paid to a creator-developer. Entities (apps) within the US Smartphone/Performance smartphone app market each have a work-product value – their total valuation as a creative product. A jury during *Brown Show* factfinding may focus on the consumer value of apps individually, which are free in this case, or the work-product value of the creation generally. Antitrust injury in this market, i.e. a censored or suppressed app, is measured as the lost value to the economy, and is equal to or greater than the app’s inherent valuation. In other words, the antitrust injury for reduced output and selection of zero priced apps is a non-zero amount.

215. The vast majority of apps are free, such as Facebook, Instagram, Snapchat, Google Search, etc. Defining a relevant market for free apps has been a “challenge,” according to an authoritative “*Antitrust and Big Tech*” report to the United States Congress (full report, incorporated herein by reference, available at <https://sgp.fas.org/crs/misc/R45910.pdf>). As the report explains:

“[Antitrust experts] maintain that antitrust law has an important role to play in zero-price markets. Some of these commentators have argued that zero-price transactions are not in fact “free” to consumers, and that consumers ultimately “pay” for putatively “free” goods and services with both their attention and personal data. According to this line of argument, many of these consumers may actually be *overpaying*. That is, some observers have argued that certain “free” products and

services may have *negative* equilibrium prices under competitive conditions, meaning that firms in the relevant markets would *pay consumers* for their attention and the use of their data if faced with sufficiently robust competition.

Other commentators have argued that firms offering zero-price products and services can compete on a variety of nonprice dimensions such as quality and privacy, and that antitrust law can promote consumer welfare in zero-price markets by ensuring that companies engage in these types of nonprice competition. This argument appears to have persuaded regulators at the DOJ. In a February 2019 speech, Makan Delrahim—the head of the Justice Department’s Antitrust Division—contended that antitrust law applies “in full” to zero-price markets because firms offering “free” products and services compete on a variety of dimensions other than price.

While many observers accordingly agree that zero-price markets are not categorically immune from antitrust scrutiny, the optimal approach to defining the scope of such markets remains open to debate.

Some commentators have argued that regulators should modify the SSNIP test to account for *quality-adjusted* prices, creating a new methodology called the “small but significant and non-transitory decrease in quality” (SSNDQ) test. According to these academics, decreases in the quality of “free” services (e.g., a decline in the privacy protections offered by a social network) are tantamount to increases in the quality-adjusted prices of those services. Under the SSNDQ test, then, a firm offering “free” goods or services would possess monopoly power if it had the ability to profitably raise its quality-adjusted prices significantly above competitive levels... The SSNIP test as traditionally administered is accordingly “inoperable” in a number of zero-price technology markets.”

216. Plaintiffs intend to present at jury trial SSNDQ tests from experts to demonstrate the metrics applicable to free apps under Sherman Act precedent. Alternatively, the “*Brown Shoe*” test may be inapplicable to free digital goods, requiring the Court to interpret the original language of the Sherman Act, and/or develop a “modified Brown Shoe” test. Plaintiffs will similarly prove the wholesale, “work-product” value of apps. Hence a jury will be informed of all possible valuation metrics with regard to the market for US Smartphone/Performance smartphone Apps.

217. There is no direct symmetry in transactions or valuation between the demand and supply side of apps. Apple could, and indeed did, purchase a weather app for millions of dollars from a developer, but then distributed it for free. In short, an app has a work-product valuation by its author – often in excess of millions of dollars – and a demand price by consumers – often free, or a

small amount. Apple is the only merchant of record selling iOS apps to consumers – all App Store purchases show as “Apple Inc” on credit card receipts. As such, Plaintiffs allege apple is a monopsony purchaser of US smartphone apps, at least on the retail side.

218. In sum, there is a relevant market for US smartphone/performance smartphone apps. The market is subject to bottleneck constraint, as Apple censors apps and reduces the available pool of creative projects. This creates substantial antitrust injury in the form of censorship, limited availability, and reduction on quality and competitiveness of apps to consumers, and in compensation to developers for their work-product.

#### **v. There is a relevant Sherman market for iPhone Notary Stamps**

219. Due to hardware constraints implemented by Apple, software may only run on iPhones that has a “mark” of notarization approval by Apple. This is a digital product, essentially invented by Apple. No other significant computer platform in history required a notary stamp from the manufacturer to run software. Notary stamps are not an integral component of smartphone, performance smartphone, operating system, or All Historic Computing platforms. The notary stamp is the main mechanism whereby Apple censors and limits software distribution and choice, and creates an antitrust injury.

220. Apple has, since about a year after the release of the iPhone, required notary stamps and charged developers and consumers for them, indirectly. The stamps are subsidized through Apple’s \$99 developer fee, and their 30% commission on app sales.

221. Undersigned counsel first invoked the notary stamp theory in 2021. Notably, in 2024 it became apparent Apple was willing to engage in contempt of a US District Court, and the EU DMA, to fight for its ability to charge directly for notary stamps. This is evidenced by the fact that Apple’s “malicious compliance” with the European Digital Markets Act turns on their direct charges to developers for notary stamps.

222. Apple now charges European app developers annually for these developer stamps, essentially maintaining much censorship authority over consumer apps despite DMA intent otherwise. The EU has recently determined that Apple violated the DMA by charging the Core Technology Fee. Charging a CTF is only enforceable through notary stamps. In other words, if the iOS platform didn't have a "padlock" notary stamp requirement, EU developers wouldn't have to pay a CTF. Therefore, the CTF is evidence of present day direct charges for notary stamps in the EU markets, which replaces ongoing notary stamp charges like the \$99 fee and 30% commissions other global markets.

223. Similarly, Apple is presently in malicious compliance with an *Epic* order from the CAND District, whereby they charge developers for links to non-Apple payment systems. These charges, like the EU CTF, are only feasible and/or enforceable because of Apple's notary stamp padlock on iOS. Apple's malicious compliance with the *Epic* order therefore serves as evidence that Apple intends to charge, directly or indirectly, for notary stamps and/or notarization services.

224. Charging for notary stamps is particularly pernicious conduct and has little historical basis. It would be akin to a TV requiring manufacturer approval to watch each film, after a consumer rightfully purchased the TV. Hence notary stamps controlling a dominant computing platform like iOS evoke "Big Brother" authoritarian connotations of censorship and control.

225. To the extent the performance smartphone markets represent a platform, notary stamps are not an integral part of the platform, and are not exempt under *Microsoft* tying precedent. Notary stamps serve no practical purpose other than to extract supra-competitive rents for Apple, and therefore do not meet the criteria set by *Microsoft*. Moreover, like All Historic Computing Platforms, the consumer ultimately purchases a device. Tim Cook testified in *Epic* that Apple sells iPhone devices to consumers. Whether the platform amongst All Historic Computing Platforms is

Mac, Windows compatible PCs, Atari, Commodore, Android, or iPhone – it is clear the consumer purchases primarily the device.

226. This is evidenced by the fact that consumers often look to run alternate operating systems on their devices. For example, on Mac, many users run Windows or Linux operating systems. Android users would run iOS, if permitted, and iOS users would run Android, or even Mac, if permitted. A consumer purchases a smartphone platform compatible device, and an associated bundling of the operating system. The device itself is the independent purchase, and notary stamps are not a component under any definition.

227. In the context of the smartphone connected internet, notary stamps are not high technology. They are analogous to a turnstile entrance at a circus fair, a toll booth, a governor on a performance racing car, or a padlock on a VCR. Not only are they not high technology, they do not represent integral functionality of a computing device or an operating system. To wit, they are the opposite: reduced functionality and reduced value of the host device.

228. The citizens of our country have invested around a trillion dollars in the iPhone “network effect” which forms an essential part of daily life and commerce. Vast functionality in this network effect is possible, given its inherent, combined computing power and communications. Unfortunately, the executor of these network computations and communications – the app – is subject to an availability bottleneck. Apple must issue a “notarization” or digital encryption signature, in order for an app to launch and access this network. Apple is the sole producer of these notarization stamps. A citizen trying to use an app made by a developer is unable to do so without a notarization stamp from Apple. Apple issues these stamps to developers and ultimately end-users using the App Store Connect developer portal, which has a \$99 annual fee to each developer. Additionally, Apple requires the developer to sign a contract of adhesion – the DPLA – granting Apple purported full discretion as to whether or not to issue the stamps.

229. Notarization requirements allow Apple to extract supracompetitive profits for userbase access rights to iPhone users. Apple charges developers like Plaintiffs and class members \$99 for these partial, limited access rights. The nearest competitor, Android, charges \$29 annually for rights, and offers a free bypass sideloading way for developers to reach their audience.

230. This itself is indicative of anticompetitive restraint in the market, as pointed out by the Subcommittee House Report. There is simply no way for a developer to directly access the Smartphone userbase. A developer who foregoes Apple misses out on 65% the market – and 80% of ‘app spending’ capability. Dr. Roberts’ app wouldn’t have been scientifically valid, if it only accessed half the country’s smartphone users. Other Plaintiffs would not, and did not, achieve critical mass for app success.

**vi. The United States is a relevant geographic market for performance smartphones and smartphones and downstream markets**

231. The United States is a relevant geographic market for the sale of performance smartphones and smartphones. Users in the United States demand services offered by U.S. retailers when they purchase a smartphone. For example, consumers who purchase a smartphone from their mobile carrier can get assistance with activating their new device, setting it up, and transferring important content like apps, messages, photos, and video to their new smartphone. A smartphone purchased abroad for use in the United States might be incompatible with the consumer’s domestic carrier, may not have the necessary radio technology to take advantage of the carrier’s highest speed connections, the carrier might not be able to offer support during setup or subsequently, or the phone’s warranty may be invalid.

232. Consumers must also purchase smartphones through a U.S. retailer if they want to take advantage of valuable promotions offered by their mobile carrier. These same promotions and free financing are unavailable to U.S. consumers who purchase their phones in other countries.

233. Finally, potential new smartphone entrants to the U.S. market must also comply with telecommunications regulations and satisfy other legal requirements. No extensive regulatory framework governs how Apple operates its platform with respect to developers, but there are a number of regulatory requirements that must be met in order to enter the smartphone market. For example, some smartphone makers are effectively barred from offering their smartphones to U.S. consumers.

234. Consumers in the United States could not avoid or defeat an increase in the price of performance smartphones or smartphones by purchasing and importing smartphones from abroad. This allows Apple to set prices for the same smartphone in the United States separately from those in other countries. For example, Apple lowered the price of the iPhone 11 in China relative to the United States because Apple faced greater competition in China. This additional competition arises in part because a popular super app put competitive pressure on Apple and made it easier for users to switch from an iPhone to a rival smartphone. As a result, Apple is unable to command the same prices for the iPhone in China than they do in the United States due to less competition.

235. The United States is a relevant geographic market for US Smartphone App Distribution Services. The apps available, and desirable, to consumers vary on a country-by-country basis. For instance, app stores frequently have country-specific “storefronts,” and U.S. consumers cannot access the storefront available to users in another country. Apple also sets certain app distribution and payment requirements for developers on a country-by-country basis, including in-app sales currency and price range requirements. Legal restrictions on apps vary by country. In this light, and due to language and cultural differences, and regulatory requirements, App distribution services available in other countries are not reasonable substitutes for app distribution services in the United States.

236. The United States is a relevant geographic market for Smartphone Apps. The apps available, and desirable, to consumers vary on a country-by-country basis. Apps are made in different languages and cultural norms to appeal to different countries. Some apps are restricted or illegal in certain countries. Localization, such as currency and time and date formatting, vary by country. A US developer may not want divert limited resources and budget to making an app work in every country, and as a solution, typically will write their app in American English, intended for a United States audience. The developer may value their app solely on the expected revenue to be obtained from US based consumers.

237. As discussed above, Apple sells notary stamps directly in the European Union as a CTF. The exact digital form of notary stamps, and pricing and distribution thereof, varies by legal jurisdiction. An appropriate notary stamp relevant market is the United States, as antitrust enforcement varies by country, and Apple's ability to charge for notary stamps largely depends upon such statutory law implementation.

**E. Apple has monopoly power in the smartphone and performance smartphone markets**

238. Apple has monopoly power in the smartphone and performance smartphone markets because it has the power to control prices or exclude competition in each of them. Apple also enjoys substantial and durable market shares in these markets. Moreover, Apple's market shares likely underestimate Apple's power because they are protected by significant barriers to entry, network effects, and switching costs. Apple recognizes and exploits these barriers to entry, network effects, and switching costs to protect itself from competition from rival platforms and innovations, products, and services that may diminish consumer reliance on the iPhone. Apple's power will likely increase over time.

239. In the U.S. market for performance smartphones, where Apple views itself as competing, Apple estimates its market share exceeds 70 percent. These estimates likely understate Apple's market share today. For example, Apple's share among key demographics, including younger audiences and higher-income households, is even larger. Even in the broadest market consisting of all smartphones—including many smartphones that Apple and industry participants do not view as competing with Apple's iPhones and other higher-end phones—Apple's share is more than 65 percent by revenue. Similarly, even if consumers choose one phone over another, the vast majority of developers consider iPhones and Android devices as complements because developers must build apps that run on both platforms due to the lack of user multi-homing. In effect, the lack of multi-homing among users necessitates multi-homing among developers. This market reality increases the power that Apple is able to exercise over developers that seek to reach users on smartphones—especially performance smartphones that run sophisticated apps.

240. Apple's high market shares are durable. Over the last decade, Apple increased its share of smartphones sold in the United States most years. Through the same period, Apple collected more than half the revenue for all smartphones sold in the United States.

241. Apple's monopoly power in the relevant markets is protected by substantial barriers to entry and expansion. For example, since fewer than ten percent of smartphone purchasers in the United States are buying their first smartphone, there are fewer new customers available for Apple's rivals. Instead, rivals must encourage existing iPhone users to switch from using an iPhone to using another smartphone when they replace or upgrade their phone. As a result, switching costs—many created or exacerbated by Apple—impose substantial barriers to entry and expansion for rival smartphones. This barrier is increasingly impenetrable. Nearly 90 percent of iPhone owners in the United States replace their iPhone with another iPhone. At least one U.S. carrier estimates that as high as 98 percent of iPhone users on its network replace or upgrade their iPhone in a given quarter

by buying another iPhone. The increased switching costs that consumers experience because of Apple's conduct underpins these exceedingly high retention rates.

242. Apple's monopoly power in the relevant markets is protected by other barriers to entry, expansion, or repositioning as well. For example, introducing a new smartphone requires considerable investments in acquiring expensive and scarce components such as mobile chips and specialized glass for screens. Other significant barriers to entry include product design, software development, regulatory approval, manufacturing, marketing, and customer service. Because most smartphones are bought through mobile carriers including Verizon, which has its operations headquarters in the NJ district, new entrants or those seeking to expand or reposition must meet the carriers' technical requirements to access the major carrier networks in the United States. New entrants and smaller rivals must also negotiate distribution agreements and persuade carriers and other retailers to promote their products to consumers. As explained above, rival smartphones must also overcome the substantial network effects generated by interactions between users, developers, and others who interact with the iPhone.

243. Apple's iPhone platform is protected by several additional barriers to entry and expansion, including strong network and scale effects and high switching costs and frictions. For example, if an iPhone user wants to buy an Android smartphone, they are likely to face significant financial, technological, and behavioral obstacles to switching. The user may need to re-learn how to operate their smartphone using a new interface, transfer large amounts of data (e.g., contacts), purchase new apps, or transfer or buy new subscriptions and accessories. These switching costs and frictions are even higher when software applications, APIs, and other functionality do not help the different devices and operating systems communicate and interoperate. These switching costs and frictions increase the "stickiness" of the iPhone, making users more beholden to the smartphone manufacturer and platform operator.

244. Many prominent, well-financed companies have tried and failed to successfully enter the relevant markets because of these entry barriers. Past failures include Amazon (which released its Fire mobile phone in 2014 but could not profitably sustain its business and exited the following year); Microsoft (which discontinued its mobile business in 2017); HTC (which exited the market by selling its smartphone business to Google in September 2017); and LG (which exited the smartphone market in 2021). Today, only Samsung and Google remain as meaningful competitors in the U.S. performance smartphone market. Barriers are so high that Google is a distant third to Apple and Samsung despite the fact that Google controls development of the Android operating system.

245. Apple's monopoly power is separately demonstrated by direct indicia. For example, Apple can and does profitably forego innovation without fear of losing customers to competitors. For example, Apple's vice president of iPhone marketing explained in February 2020: "In looking at it with hindsight, I think going forward we need to set a stake in the ground for what features we think are 'good enough' for the consumer. I would argue were [sic] already doing \*more\* than what would have been good enough." After identifying old features that "would have been good enough today if we hadn't introduced [updated features] already," she explained, "anything new and especially expensive needs to be rigorously challenged before it's allowed into the consumer phone."

246. Apple's profits and profit margins, for nearly every aspect of the iPhone, are further evidence of Apple's monopoly power. For example, Apple's per-unit smartphone profit margins are far more than its next most profitable rival. Apple charges carriers considerably more than its rivals to buy and resell its smartphones to the public and employs contract clauses that may impede the ability of carriers to promote rival smartphones, a harmful exercise of monopoly power that is hidden to most consumers. Apple extracts fees from developers—as much as 30 percent when users

purchase apps or make in-app payments. Apple also extracts a 0.15 percent commission from banks on credit card transactions through its digital wallet, while none of its smartphone competitors with digital wallets charge any fee. Apple predicts that it will collect nearly \$1 billion in worldwide revenue on Apple Pay fees by 2025. A recent report by the U.S. Consumer Financial Protection Bureau suggest these revenues will only increase, as “analysts expect the value of digital wallet tap-to-pay transactions will grow by over 150 percent by 2028.”

247. Apple increasingly charges developers additional fees to promote their apps in the App Store as well. In fact, this is one of the fastest-growing parts of Apple’s services business, with revenue “increasing by more than a third to \$4.4B in FY 2022.”

248. These indicia of Apple’s monopoly power are direct evidence of its monopoly power in the relevant markets.

## **X. Jurisdiction and Venue**

249. Jurisdiction in this Court arises under 28 U.S.C. § 1331, for federal questions presented pursuant to 15 U.S.C. § 26 (Clayton Antitrust Act). Diversity jurisdiction is invoked pursuant to 28 U.S.C. § 1332 because the parties reside in different districts and the amount in controversy exceeds \$75,000. This Court has subject matter jurisdiction, pursuant to the Class Action Fairness Act of 2005, 28 U.S.C. 1332 (d), because the proposed class of up to twenty million Apple developers exceeds 100 members, the amount in controversy exceeds \$5,000,000, and at least one member of the class of plaintiffs is a citizen of a state different from Defendant Apple Inc., a California corporation.

250. Venue in the Wyoming District is proper under 15 U.S.C. § 22, which states that any suit proceeding under antitrust laws against a corporation may be brought in any district where it transacts business. Apple transacts business in Wyoming. Plaintiffs CRC and Calid are Wyoming Corporations. GFVC is an investor and/or benefactor with ongoing pecuniary interests in Wyoming

corporations including CRC and Calid. Apple's developer agreement contains a forum selection clause assigning venue to California Northern District. This Complaint submits that the forum selection clause violates the intent of Sherman Act and constitutes a contract of adhesion.

## XI. Putative Class Definitions

251. Plaintiffs bring this proposed class action pursuant to Fed. R. Civ. P. 23(b)(1), (2), and (3).
252. Plaintiffs bring this action on behalf of themselves and the following nationwide class, for monetary and injunctive relief based on violations of the Sherman Act:

*All U.S. Smartphone developers of any free app (zero-priced) that suffered economic losses through disallowance, censorship, and/or ranking suppression on the App Store.*

253. Not included in this proposed class is the defendant; defendant's affiliates and subsidiaries; defendant's current or former employees, officers, directors, agents, and representatives; and the district judge or magistrate judge to whom this case is assigned, as well as those judges' immediate family members.

254. Plaintiffs also bring this action on behalf of themselves and the following nationwide class, for monetary and injunctive relief based on violations of the Sherman Act:

*Any US [Performance] Smartphone developer who paid a \$99 annual subscription fee to Apple for access to its userbase and/or app "notarization."*

255. Not included in this proposed class is the defendant; defendant's affiliates and subsidiaries; defendant's current or former employees, officers, directors, agents, and representatives; and the district judge or magistrate judge to whom this case is assigned, as well as those judges' immediate family members.

256. **Numerosity:** The exact number of the members of the proposed classes is unknown and is not available to the plaintiffs at this time, but upon information and belief, supported by Apple's

past statements, the classes will consist of approximately two million iPhone developers, and therefore individual joinder in this case is impracticable.

257. **Commonality:** Numerous questions of law and fact are common to the claims of the plaintiffs and members of the proposed classes. These include, but are not limited to: a. Whether there is a U.S. market for [performance] smartphones; whether there is a U.S. market for apps and app distribution services; c. whether there is a U.S. market for iPhone notary stamps, d) Whether Apple has unlawfully monopolized, or attempted to monopolize, the above markets, including by way of the contractual terms, policies, practices, mandates, and restraints described herein; d. Whether competition in these markets has been restrained and harmed by Apple's monopolization, or attempted monopolization, of each market; e. Alternatively, whether Apple has behaved as a monopsonist, or attempted monopsonist, in the wholesale app markets; f. Whether plaintiffs and members of the proposed classes are entitled to declaratory or injunctive relief to halt Apple's unlawful practices, and to their attorney fees, costs, and expenses; g. Whether plaintiffs and members of the proposed classes are otherwise entitled to any damages, including treble damages, or restitution, and to their attorney fees, costs, and expenses related to any recovery of such monetary relief; and h. Whether plaintiffs and members of the proposed classes are entitled to any damages, including treble damages, or restitution incidental to the declaratory or injunctive relief they seek, and to their attorney fees, costs, and expenses related to any recovery of such monetary relief.

258. **Typicality:** Plaintiffs' claims are typical of the claims of the members of the proposed classes. The factual and legal bases of Apple's liability are the same and resulted in injury to plaintiffs and all of the other members of the proposed classes.

259. **Adequate representation:** Plaintiffs will represent and protect the interests of the proposed classes both fairly and adequately. They have retained counsel able to engage, and experienced

with, complex litigation. Plaintiffs have no interests that are antagonistic to those of the proposed classes, and their interests do not conflict with the interests of the proposed class members he seeks to represent.

**260. Prevention of inconsistent or varying adjudications:** If prosecution of a myriad of individual actions for the conduct complained of were undertaken, there likely would be inconsistent or varying results. This would have the effect of establishing incompatible standards of conduct for the defendant. Certification of Plaintiffs' proposed classes would prevent these undesirable outcomes.

**261. Injunctive and declaratory relief:** By way of its conduct described in this complaint, Apple has acted on grounds that apply generally to the proposed classes. Accordingly, final injunctive relief or corresponding declaratory relief is appropriate respecting the classes as a whole.

**262. Predominance and superiority:** This proposed class action is appropriate for certification. Class proceedings on these facts and this law are superior to all other available methods for the fair and efficient adjudication of this controversy, given that joinder of all members is impracticable. Even if members of the proposed classes could sustain individual litigation, that course would not be preferable to a class action because individual litigation would increase the delay and expense to the parties due to the complex factual and legal controversies present in this matter. Here, the class action device will present far fewer management difficulties, and it will provide the benefit of a single adjudication, economies of scale, and comprehensive supervision by this Court. Further, uniformity of decisions will be ensured.

## XII. Violations Alleged

### **A. First Claim for Relief: Monopolization of the Performance Smartphone Market in the United States in Violation of Sherman Act § 2**

263. Plaintiffs restates, re-alleges, and incorporates by reference each of the allegations set forth in the prior sections of this Complaint as if fully set forth herein.

264. Performance smartphones in the United States is a relevant antitrust market, and Apple has monopoly power in that market.

265. Apple has willfully monopolized the performance smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased, maintained, or protected its performance smartphone monopoly.

266. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

267. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts as described herein have had harmful effects and incurred damages on competition, consumers, and developers including Plaintiffs and class members.

268. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.

**B. Second Claim for Relief, in the Alternative: Attempted Monopolization of the Performance Smartphone Market in the United States in Violation of Sherman Act § 2**

269. Plaintiffs incorporate the allegations of the prior sections as if set forth fully herein.

270. Performance smartphones in the United States is a relevant antitrust market, and Apple has attempted to monopolize that market.

271. Apple has attempted to monopolize the performance smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased Apple's market power in the performance smartphone market.

272. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

273. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts as described herein have had harmful effects and incurred damages on competition, consumers, and developers including Plaintiffs and class members.

274. In undertaking this course of conduct, Apple has acted with specific intent to monopolize, and to destroy effective competition in, the performance smartphone market in the United States. There is a dangerous probability that, unless restrained, Apple will succeed in monopolizing the performance smartphone market in the United States, in violation of Section 2 of the Sherman Act.

**C. Third Claim for Relief: Monopolization of the Smartphone Market in the United States in Violation of Sherman Act § 2**

275. Plaintiffs incorporate the allegations of the prior sections as if set forth fully herein.

276. Smartphones in the United States is a relevant antitrust market, and Apple has monopoly power in that market.

277. Apple has willfully monopolized the smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased, maintained, or protected its smartphone monopoly.

278. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

279. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts as described herein have had harmful effects and incurred damages on competition, consumers, and developers including Plaintiffs and class members.

280. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.

**D. Fourth Claim for Relief, in the Alternative: Attempted Monopolization of the Smartphone Market in the United States in Violation of Sherman Act § 2**

281. Plaintiffs incorporate the allegations of the prior sections as if set forth fully herein.

282. Smartphones in the United States is a relevant antitrust market, and Apple has attempted to monopolize that market.

283. Apple has attempted to monopolize the smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased Apple's market power in the smartphone market.

284. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the specific manner of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

285. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts as described herein have had harmful effects and incurred damages on competition, consumers, and developers including Plaintiffs and class members.

286. In undertaking this course of conduct, Apple has acted with specific intent to monopolize, and to destroy effective competition in, the smartphone market in the United States. There is a dangerous probability that, unless restrained, Apple will succeed in monopolizing the smartphone market in the United States, in violation of Section 2 of the Sherman Act.

**E. Fifth Claim for Relief: Illegal Tying Between [Performance] Smartphones/iPhone Devices and Notary Stamps / App Stores**

287. Plaintiffs restate, re-allege, and incorporate by reference each of the allegations set forth in the prior sections of this Complaint as if fully set forth herein.

288. Apple's conduct violates Section 1 of the Sherman Act, which prohibits “[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations”.15 U.S.C. § 1.

289. Through its End User Agreement with iPhone users, hardware constraints, and its kernel notarization requirements, Apple has unlawfully created a tie from the iPhone performance smartphone to the App Store distribution service and/or digital Notary Stamps.

290. Apple has sufficient economic power in the tying market, the US Smartphone and/or Performance smartphone market, because its iPhone holds at least 65% of this market. Moreover, the iPhone device user often is locked in to their device, or has substantial barriers to exit. As such, the user has no choice but to accept the App Store offerings (Apple's curated apps, favoring their own competing products) and Notary Stamp requirement which are mandated by the EULA and DPLA. Apple's forced agreement with DPLA signatories (developers) constitutes a bilateral agreement, limiting both consumers and developers proper fair use of the iPhone [performance] smartphone.

291. Apple is able to unlawfully condition access to the iPhone device to the use of a second product—App Store app distribution service. Through its End User License Agreement and

unlawful policies like DPLA, Apple expressly conditions the use of its devices on its “walled garden” app store marketplace – which is subject to severe bottleneck constraints on developer work-product availability and selection. This amounts to a *per se* unlawful tying arrangement, pernicious conduct under *Northern Pacific*, and a dangerously inefficient one that denies users the benefit of the network they invested in.

292. The tying product, Apple’s iPhone U.S. smartphone/performance smartphone device, is distinct from the tied product, Apple’s App Store. App developers such as Plaintiffs have apps, and effectively their own “app store” that would be trivial to launch on their website, but for Apple’s EULA/DPLA based notarization requirements. End users are coerced into using the App Store, harming consumers developers.

293. Developers similarly could email apps to their customers, in addition to allowing them to be installed from a website. Apple prevents developers and other entities from offering such competing app distribution services, by disallowing all valid distribution channels other than the App Store. This restriction to a single app store is not a feature of any device or platform, rather, it is an exclusionary anticompetitive technique meant to collect fees, rather than advance the primary purpose of a consumer iPhone purchase – to run apps.

294. Apple’s unlawful tying arrangement thus ties separate products that are in separate markets and coerces Plaintiffs and third-party end users to rely on both of Apple’s products. The tying to a device (iPhone) in the performance smartphone foremarket is not immune to *per se* rules subsequent to *Microsoft* because the tying product is not a software platform, it is a hardware device. In the words of Tim Cook, “Apple sells devices.”

295. Secondly, Apple is able to unlawfully condition access to iPhone smartphone/performance smartphone device to the use of a second product—notary stamps. Through its algorithmic control of the iOS kernel and tightly linked hardware constraints, the end user is contractually and

algorithmically bound to use apps with Notary Stamps. Censored developers are unable to purchase or obtain them, to the tune of 40,000 denials per week. This amounts to a *per se* unlawful tying arrangement, and a dangerously inefficient one that denies users the choice and selection of diverse apps. Neither the iPhone device nor the notary stamp qualify as “software platforms” under *Microsoft*.

296. The notary stamp requirement as implemented in iOS is a crude turnstile meant to collect fees for Apple, meanwhile disabling key functionality of the performance smartphone. It serves no pro-competitive purpose. Consumers purchasing smartphones, like consumers of All Historic Computing Devices, do not wish to pay for such a turnstile, toll booth, padlock, governor, and so forth.

297. The tying product, Apple’s iPhone performance smartphone device, is distinct from the tied product, notary stamps, because such a ‘permission ticket’ to launch an app is separate and distinct from a smartphone, which in this case, is derived from a Mac OS computing platform. Apple’s unlawful tying arrangement thus ties two separate products that are in separate markets and coerces Plaintiffs and third-party end users to rely on both of Apple’s products. Apple created an artificial demand for notary stamps by implementing kernel algorithms backed by the purported authority of DPLA & EULA.

298. Apple’s conduct has downstream and collateral effects that foreclosed, and continues to foreclose, competition in the US Smartphone App market affecting a staggering volume of commerce in these markets.

299. No other major computing platform in history required use of a single software store, administrated by the computer hardware manufacturer. Similarly, no major computing platform required notary stamps issued by the hardware manufacturer, for permission to run software and

lifetime manufacturer earnings on software purchases. This tying is egregious and pernicious and unprecedented in All Historic Computing Platforms.

300. Apple has thus engaged in a *per se* illegal tying arrangement and the Court does not need to engage in a detailed assessment of the anti-competitive effects of Apple's conduct or its purported justifications.

301. In the alternative only, even if Apple's conduct does not constitute a *per se* illegal tie, an analysis of Apple's tying arrangement would demonstrate that this arrangement violates the rule of reason and is illegal by coercing end-users into using its App Store and notary stamps.

302. Apple's conduct harms those Plaintiffs and class members which, as a direct result of Apple's conduct, including censorship and anti-competitive controls, harm their ability to efficiently distribute their apps and be compensated fairly for their creative work product. Censored developers cannot distribute their work-product to consumers.

303. The U.S. Supreme Court has held that “the answer to the question whether one or two products are involved turns not on the functional relation between them, but rather on the character of demand for the two items.” Thus, the most important factor in determining whether two distinct products are being tied together is whether customers want to purchase the products separately. If customers are not interested in purchasing the products separately, there is little risk the tie could foreclose any separate sales of the products. Here, all tied products meet the SCOTUS requirement for consumer interest. Clearly, consumers are interested in purchasing apps separately from smartphones/performance smartphones. Consumers also want permission to run these apps (notary stamps), and fought for “jailbreaking rights” to the US Copyright Office in 2010, which was granted.

304. A party seeking to defend such a *per se* tying arrangement on the basis of competitive justifications bears a heavy burden of proof; the defense is difficult to establish and has been successful only under limited circumstances.

305. Apple's tying arrangement additionally violates Section 2 of the Sherman Act, which prohibits "monopolization of any part of the trade or commerce among the several States, or with foreign nations. 15 U.S.C. Section 2 (see Above Counts). Apple holds monopoly power in the US Performance smartphone Markets. It uses this power to obtain and achieve monopoly power in the US App Distribution Services, where it holds 80% share of revenue. By tying these two distinct markets, Apple is able to leverage and reinforce both monopolies. Similarly, it leverages the [performance] smartphone monopoly to implement an unnecessary single-brand notary stamp market.

#### **F. Sixth Claim for Relief: Supra-competitive \$99 Fee Class Action Recovery Fund**

306. Plaintiffs repeat and re-allege each and every allegation of the preceding sections as if fully stated under this count.

307. Apple's conduct violates Section 1 of the Sherman Act, which prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations". 15 U.S.C. § 1.

308. Through its DPLA agreement, Apple requires developers pay \$99 annually for access notary stamps, app store distribution, and generally, access to the iPhone smartphone/performance smartphone userbase. This contract of adhesion forces developers into consenting to this bilateral arrangement, because Apple holds monopoly control over [performance] smartphone users and their inherent ability to install and download software.

309. This conduct therefore has detrimental impacts on the US Smartphone App relevant market. Specifically, charging this supra-competitive fee dissuades and hinders developers from producing apps, and therefore reduces the quality, selection and overall competitive health of the US Smartphone App market.

310. Apple's conduct additionally violates Section 2 of the Sherman Act, which prohibits "monopolization of any part of the trade of commerce among the several States, or with foreign nations. 15 U.S.C. Section 2 (see Above Counts). Apple holds monopoly power in the market for US Smartphones, and downstream App Stores. Apple's requirement that developers pay \$99 to access the App Store reinforces and leverages their monopolies in the smartphone, performance smartphone, and app distribution services market.

311. Apple unlawfully restrains trade and maintains its monopoly powers in the relevant markets, by issuing an illegal demand of money from 20 million aspiring developers. Apple extracts \$99 each year from any aspiring developer – many being college students or recent, indebted graduates – if they wish to access the App Store access the userbase of the US Smartphone Market.

312. The Congressional Subcommittee refers to this as an illegal tax that amounted to nearly \$20 billion over the last ten years. The Subcommittee states that the \$99 fee is nowhere near Apple's actual cost to notarize and run the software platforms. (See p.340-359 in Subcommittee Report).

313. When iPhone was first introduced, Steve Jobs promised to charge developers just enough to cover Apple's costs. Unfortunately this evolved into one of the largest illegal taxes in history. By way of comparison, Google charges \$25 to developers to join their program, and this is optional. Any developer may write an Android app and sell it or email it to a consumer for sideloading, without Google's permission.

314. Not only are Apple's developer fees an illegal tax exceeding \$1000 for each of these developers over their career, but they heavily impede interstate commerce. A developer who does

not pay this tax, perhaps because they cannot afford it, will not produce apps. App output is restricted unless one assumes that 100% of developers can afford to pay this tax without consequence to their productivity. Clearly such an assumption is not reasonable. Hence, interstate commerce of valuable digital assets – smartphone apps— is severely restricted by this illegal demand. The illegal demand to 20 million developers – nearly every computer programmer on the planet – is used to fund the growth of Apple’s monopoly, and must be enjoined by this Court, as mandated by the Sherman Act. The intent and wishes of Steve Jobs must be upheld.

#### **G. Seventh Claim for Relief: *Aspen Skiing Co. v. Aspen Highlands* Exclusionary Conduct**

315. Plaintiffs restate, re-allege, and incorporate by reference each of the allegations set forth in the prior sections of this Complaint as if fully set forth herein.

316. *Aspen Skiing Co. V. Aspen Highlands Skiing Corp.* (472 U.S. 585, 1985) unequivocally broadens the examination of monopolistic behavior beyond the boundaries of market definition into the realm of exclusionary conduct. The Supreme Court has provided vital precedent, recognizing that a monopolist’s refusal to deal with competitors, absent a credible efficiency rationale, can constitute a standalone concern under the purview of antitrust enforcement. The operative conduct under scrutiny is exclusion of rivals, not the defendant’s power within a strictly defined market.

317. The record demonstrates that *Coronavirus Reporter* was a competing app to Apple’s own Covid-19 SDK applications. Plaintiffs present allegations that mirror the factual antecedents of *Aspen Skiing*—articulating a pattern of exclusionary actions directed against competitors by Apple which bore no relation to efficiency or consumer benefit, instead stifling innovation, competition, and market accessibility. This conduct, tantamount to the exclusionary practices in *Aspen Skiing*, where the Supreme Court found monopoly leveraging absent a detailed market analysis, calls for substance over strict formality in identifying antitrust violations.

318. To save lives, CRC needed to utilize GPS and other systems not readily available on websites. Apple excluded Covid-19 app rivals, in order to build their own brand goodwill and strategic partnerships. As the DOJ Complaint alleges, Apple's conduct routinely sacrifices short-term profits to build out their long-term smartphone monopoly. COVID tracking apps are a significant part of the broader US Smartphone Apps relevant market described above. In fact, one recently filed Class Action lawsuit in the DC District alleges that COVID-19 tracking startup apps constitute their own relevant sub-market. The DC case includes Coronavirus Reporter Corporation in its putative class definitions.

319. Damages accrued to Plaintiffs and class members when Apple sacrificed short-term gains from distribution of Plaintiffs competing apps, COVID or otherwise, to achieve a long-term strategic advantage on their own competing apps, such as Facetime and their COVID tracking software, and the [performance] smartphone monopoly, generally. This is directly analogous to *Aspen*, because developers were excluded from the App Store facilities for strategic reasons. Developers who signed the DPLA had a pre-existing business relationship with Apple.

320. Sherman Act essential facilities doctrine is a similar but distinct theory from *Aspen*'s exclusionary conduct doctrine. Most essential facility cases considered by district courts during the past decade rely on the four-prong test enunciated in *MCI Communications Corp. v. American Tel. & Tel. Co.*, 708 F.2d 1081 (7th Cir.), cert. denied, 464 U.S. 891 (1983), a case challenging AT&T's use of local telephone networks to thwart competition in the long distance telephone service market. There, the court held that "to establish liability under the essential facilities doctrine [a plaintiff must show]: (1) control of the essential facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility." Id. at 1132-33."

321. Apple's conduct violates all four elements of the *MCI* test.
322. Apple competes with developers in the US smartphone/performance smartphone app market, as well as the US smartphone/performance smartphone app distribution services market. It is also a monopolist/monopsonist US smartphone app distribution services market.
323. Apple controls an essential facility necessary to compete in these markets. Apple controls its smartphone userbase through notarization and digital signature requirements, and restriction of sideloading software. A developer is unable compete in the US smartphone app market, without these notary stamps and sideloading utilities. Apple restricts the entire US App market (both sides, institutional and retail distribution) by excluding developers from these two technologies. Notary stamps and sideloading utilities are therefore essential facilities under Apple's control.
324. Apple engages in exclusionary behavior that denies essential facilities to Plaintiffs and other app developers. Apple routinely denies notary stamps to developers, as it did with Plaintiffs. Contractually, it denies access to the iOS userbase through restrictive DPLA App Store policies.
325. Because Apple has its own apps in the US smartphone app market, by definition Apple excludes competitors. Apple does so by leveraging its control over the App Store, performance smartphone device, and operating system.
326. App developers are unable to reasonably or practically duplicate the entire infrastructure for the notary stamps. Notary stamps cannot be reproduced because they contain encryption codes. Despite using advanced encryption, the notary stamps amount to nothing more than a money collecting device, akin to a turnstile, meant to charge perpetual fees to the public. Apple's exclusionary practices, blocking programmers from accessing a network of billions of computers paid for by their owners, is truly unprecedented.

327. In fact, providing tools to openly access a computing platform userbase is exactly what Apple has done for forty years with the Mac product ecosystem, a respected and successful computing platform that laid the foundation for iOS.

328. Apple's denial of access to iOS users and networks has no legitimate business purpose, and serves only to assist Apple in maintaining its unlawful monopoly position in the increasingly critically important app market.

329. Apple's conduct affects a substantial volume of interstate as well as foreign commerce. Apple's conduct has substantial anti-competitive effects, including increased prices and costs, reduced innovation and quality of service, and lowered output.

330. As an app developer, Plaintiffs and class members have been harmed by Apple's anti-competitive conduct in a manner that the antitrust laws were intended to prevent. Plaintiffs have suffered and continue to suffer harm and irreparable injury, and such harm and injury will not abate until an injunction terminates Apple's anti-competitive conduct.

331. Apple's exclusionary behavior blocked an entire class of COVID-19 tracking startups, a subset of the US smartphone apps market, from contributing to a public health emergency. Lives were likely lost, and Apple's behavior must now be dealt with by the Court to prevent a worse tragedy from occurring in the future. To prevent these ongoing harms, the Court should enjoin the anti-competitive conduct complained of herein.

## **H. Eighth Claim for Relief: Ranking Manipulation**

332. Plaintiffs repeat and re-allege each and every allegation contained herein as if fully stated under this count.

333. Apple's conduct violates Section 1 of the Sherman Act, which prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations".15 U.S.C. § 1.

334. In the relevant market of U.S. Smartphone Apps, Apple unlawfully restricts trade, through app ranking manipulation and/or suppression. When an app isn't listed in a critical directory, such as the App Store rankings, or is ranked below where it should fairly be, fewer customers can discover the app. This results in customers defaulting to bundled apps, i.e. Apple's preinstalled apps, or to Apple's (and strategic partners) other apps given self-preferential treatment in the App Store rankings. By leveraging its market power or monopoly in the smartphone market, and requiring customers to use the App Store rankings, Apple is able to restrain trade downstream, in the smartphone app market.

335. By not listing an App correctly on the app store, i.e. censoring, downranking, or suppressing it, the consumers simply cannot find developers through their preferred means of search (App Store). When a business isn't listed under the correct keywords, or any keywords, on the primary directory of all iOS apps, interstate commerce is restricted. Transparent information enables efficient commerce; the App Store is the opposite, and results in substantial quantities of inefficient app installs.

336. Apple's "zero-sum game" defense is specifically disputed, which claims that downranking one app leads to the up-ranking of another, and therefore no restraint of trade occurs in suppressing individual apps. This is because app rankings are not a perfectly efficient equilibrium. Consumer behavior tends to select the first few apps in a list, and ignores the lower ones. Hence when Apple consistently ranks its own products, and its partners, higher in app lists, there is a net detriment to lower ranked apps that may be better quality. Alternatively, the purported zero-sum equilibrium of app ranking requires specialized analysis by game-theory experts during discovery.

337. Apple's conduct likewise violates Section 2 of the Sherman Act, which prohibits "monopolization of any part of the trade or commerce among the several States, or with foreign nations. 15 U.S.C. Section 2. Apple leverages its monopolies in the US Smartphone/Performance smartphone markets, and US app distribution services markets to self-preference their own apps and strategic partners, like TikTok over WebCaller, and protect all of their monopolized interests. Apple's conduct in self-preferential App Store rankings restricts interstate trade in these critical markets and must be enjoined by this Honorable Court.

#### **I. Ninth Claim for Relief: Violation of Wyoming Consumer Protection Act and California Unfair Competition Law**

338. Plaintiffs repeat and re-allege each and every allegation contained herein as if fully stated under this count. Wyoming Consumer Protection Act ("WCPA") and California Unfair Competition Law ("UCL") are hereby referred to collectively as "State Competition Laws."

339. Apple violates State Competition Laws by engaging in Unlawful, Unfair, and or Deceptive Conduct. Apple's unlawful acts violate Sherman Act, and include imposing contractual restrictions, fees, and taxes on app creation and distribution that stifle competition and innovation. Specifically, Apple has:

- Controlled App Creation and Distribution: Apple exercises its control over app creation and distribution to dictate how developers innovate for the iPhone, enforcing rules and contractual restrictions that prevent developers from creating apps that could threaten Apple's dominance. This conduct stifles innovation and limits consumer choice.
- Extracted Monopoly Rents: Apple extracts significant fees from developers, including excessive commission on app sales and other fees are designed to benefit Apple's bottom line by maintaining its monopoly power rather than enhancing consumer welfare.

- Maintained Exclusive Control Over APIs: Apple restricts access to APIs necessary for app functionality, limiting the ability of developers to create competitive apps that offer similar or superior functionality to Apple's own apps.

340. Apple's CTF practices are similarly unlawful as they contravene the legal rules set out in the European Union's Digital Markets Act (DMA), which aims to ensure fair competition and prevent gatekeepers from abusing their market position. Although the DMA is European legislation, its principles reflect global standards for fair competition, and non-compliance affects US-based developers who wish to distribute apps in Europe, including Greenflight and CRC.

341. Apple's business practices are unfair because they offend established public policy, are immoral, unethical, oppressive, unscrupulous, and substantially injurious to consumers and developers. The unfair practices notably include Censorship of Apps. Apple's practice of censoring apps from independent developers and scientists during critical times, such as the COVID-19 pandemic, demonstrates a clear violation of fair business practices. Apple's decision to exclude certain apps from the App Store, while allowing similar apps from large institutions, is a significant restraint on trade and innovation. Apple's own research proved that COVID-19 tracking apps saved lives. By delaying the first mover, CRC, by several months, Apple's conduct cost lives. Similarly, ongoing reduction in the quality of COVID-19 tracking startups, and subsequent versions by CRC, cost lives. That is inherently unfair conduct under the State Competition Laws.

342. Left unchecked, Apple's conduct inevitably will censor essential future discoveries by independent scientists. What if a leading independent researcher wrote an app to ascertain environmental risks of microwave radiation (i.e. 5G)? Or potential harm to marine and aviary life from a new technology? We already know the answer – Apple will censor the apps if they feel threatened, even at the cost of human lives and environmental stewardship. This is not just a case

about COVID-19: it is a case against allowing one actor – the largest monopoly in history – to restrict the important works of independent scientists, petitioners, writers, and thinkers.

343. Apple’s argument to the Ninth Circuit that “censorship is not an antitrust injury” is hereby contested as declaration of unfair business practices. Even if censorship does not constitute a direct antitrust injury under the Sherman Act, it undeniably constitutes unfair conduct under the UCL and WCPA. By arbitrarily censoring apps like Coronavirus Reporter and downranking apps like WebCaller, Apple has chilled the free expression of app developers, particularly disadvantaging smaller developers and harming public welfare. Apple surely recognizes this inherent unfairness: they based their first 1984 Mac ad on such a Big Brother concept.

344. Apple engages in preferential treatment when it supports certain apps, like TikTok, while suppressing others like WebCaller. This selective support distorts the competitive landscape and deprives consumers of the benefits of a diverse and competitive market. The manipulation of App Store rankings, to favor strategic partners over independent developers, exemplifies this unfair conduct. Developers of cross-platform video apps would not invest in costly programming efforts, if they knew the scales were usually tipped in favor of partners like TikTok.

345. The unfair practices of Apple extend to all fifty states, including harm to consumers and developers in Wyoming and California. Apple has management in California, North Carolina, Texas, and London. Senior level decisions stemming from its headquarters in California have significant impacts on US-based developers including Plaintiffs and class members. Decisions made at Apple’s California headquarters determine compliance with DMA, Sherman Act, and additionally the accessibility and visibility of apps on a national and international scale, demonstrating a direct link to unfair competition practices within the state of California. Extraterritorial enforcement of UCL is therefore appropriate, similar to the DOJ’s State Competition Laws being adjudicated in New Jersey District.

346. Apple’s requirement for app notarization effectively curtails the network effect of its platform. By requiring Apple’s permission to run any app on its devices, Apple imposes an unfair barrier to entry for developers, and unfair situation for the consumers who pay for their devices. This practice can be likened to requiring a VCR or CD player to obtain approval from Sony for every film or music album played, which is fundamentally unfair and not what consumers expect when purchasing a product. Consumers who purchase iPhones should be permitted to access a wide variety of apps, with the understanding that Apple will not censor their choices.

347. Apple’s actions are also *de facto* fraudulent under the WCPA and UCL because they are likely to deceive developers and consumers and/or incur unjust enrichment from their work products. Apple’s representations about the App Review submission process being a fair and neutral venue are false and misleading. Consumers believe they have a competitive selection of apps, but are defrauded in cases such as TikTok, where better video communication tools may have existed, but for Apple’s anticompetitive conduct. As explained earlier, when consumers suffer from such conduct, developers also are harmed. Apple falsely represents that the App Store is a neutral platform that provides honest and fair opportunities in ranking and distribution for all developers. In reality, Apple uses its control over app distribution to favor its own apps and those of its strategic partners, deceiving developers and consumers about the true nature of the App Store. For example, apps like TikTok are given preferential assistance “navigating” the app store and are approved and ranked favorably to compensate partners, in this case, the Chinese government.

348. Apple engages in the practice of “Sherlocking,” where it reviews and appropriates ideas from developers’ app submissions for its own benefit. Apple’s ability to review and analyze bulk submissions, learn from them, and then integrate these ideas into its own products without compensation to the original developers is fundamentally unfair. This practice amounts to systemic fraud or unjust enrichment. Apple does not disclose how it uses app submissions to inform its own

product development, does not compensate developers who materially contribute to Apple projects without their consent, and therefore deceives developers who trust the platform to protect their intellectual property.

349. The end result is that Apple charges developers \$99 each year to Sherlock their ideas, censor them, then fund or otherwise assist competitors such as TikTok. That is inherently unfair, and/or fraudulent, as no reasonable person would voluntarily choose to pay this fee. They would find another app distribution point, but that doesn't exist. This is a monopoly situation where developers, including creative professionals, scientists, authors and painters, must appease a monopoly to distribute their creative work-product. That is inherently unfair and deceptive.

350. Developers who actually protested such conduct, such as *Epic* and Plaintiffs, were routinely met with retaliatory actions by Apple. Discovery is necessary to reveal the full extent of how the largest monopoly in history endeavored to dissuade Sherman Act enforcement actions such as this case. Apple's lobbying efforts alone for the Open App Markets Act were estimated around \$100 million. Unlike lobbying, direct retaliation against antitrust advocates represents potential violation of 18 USC §1512, and therefore is illegal conduct under the definitions of WCPA and UCL.

351. Plaintiffs and class members all incurred damages from such conduct, and seek relief under the WCPA and UCL including an order enjoining Apple from continuing its unlawful, unfair, and fraudulent business practices, including but not limited to its restrictive app creation and distribution policies, API restrictions, and manipulation of App Store rankings. Restitution to Plaintiffs and other affected developers for the fees and commissions extracted by Apple through its anticompetitive practices is hereby sought. The \$99 Annual Fee is specifically subject to restitution as an improper charge.

352. Under Wyoming Law 40-12-105(a)(xv), "A person engages in a deceptive trade practice unlawful under this act when, in the course of his business and in connection with a consumer

transaction, he knowingly Engages in unfair or deceptive acts or practices.” Under Wyoming 40-12-108(b), a class action remedy is permitted for damages suffered by consumers as a result of such unlawful deceptive trade practice. Plaintiffs seek actual damages for the deceptive practices employed by Apple, including the \$99 developer fee that was unfairly charged, as well as losses from Sherlocking and ranking manipulation.

353. Case law supports a broad interpretation of consumer protection statutes to include any party engaging in a transaction covered by the statute. The principles established in *Federal Trade Commission v. Sperry & Hutchinson Co.* highlight that consumer protection laws are designed to prevent unfair practices in their incipiency, thereby offering broad remedies (405 U.S. 233, 239 (1972)). Under Wyo. Stat. § 40-12-105(a), the WCPA aims to prevent deceptive and unfair business practices, which aligns with the broader goals of consumer protection statutes. This is crucial when addressing anticompetitive practices that harm both developers and consumers. While developers are primarily commercial entities, they engage in transactions with Apple that have significant consumer implications, particularly when these practices reduce market competition and innovation, thereby impacting end consumers. By way of clarification, developers are consumers of Apple’s notarization fee products pursuant to 40-12-108(a), and subject to unfair practices directly affecting consumer transactions, pursuant to 40-12-102(a)(ii).

354. Wyoming Consumer Protection Act (WCPA) mandates a two-year statute of limitations following the unfair or anticompetitive transaction. By seeking restitution under California’s UCL and damages under Wyoming’s Consumer Protection Act, Plaintiffs request relief to the fullest extent allowable under either jurisdiction’s laws.

### XIII. Request for Relief

WHEREFORE, to remedy these illegal acts The Plaintiffs and class members respectfully request that this Honorable Court:

- A. Certify this case as a developer class action lawsuit and that it certify the proposed federal law classes on a nationwide basis for all developers of apps that were censored, disallowed or subject to ranking manipulation, or subject to excessive \$99 DPLA/notarization fees between today's filing date and four years prior.
- B. Adjudge and decree that Apple has acted unlawfully to monopolize, or, in the alternative, attempt to monopolize, the smartphone market in the United States in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2;
- C. Adjudge and decree that Apple has acted unlawfully to monopolize, or, in the alternative, attempt to monopolize, the performance smartphone market in the United States in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2;
- D. Enjoin Apple from continuing to engage in the anticompetitive practices described herein and from engaging in any other practices with same purpose or effect as the challenged practices, including but not limited to:
  - a. preventing Apple from using its control of app distribution to undermine cross-platform technologies such as super apps, cloud streaming apps, and COVID-19 tracking apps, among others;
  - b. preventing Apple from using private APIs to undermine cross-platform technologies like WebRTC Apps, messaging, smartwatches, and digital wallets, among others; and

c. preventing Apple from using the terms and conditions of its contracts with developers, accessory makers, consumers, or others to obtain, maintain, extend, or entrench a monopoly.

Issue a permanent injunction restraining Defendant from requiring notary stamps to launch iPhone applications, and from charging \$99 annual developer fees to subsidize notary stamp techniques; and any other preliminary or permanent relief necessary and appropriate to restore competitive conditions in the markets affected by Apple's unlawful conduct;

E. Order treble damages compensating the Class Members through a "Developer Compensation Fund" based on developer submission of damages computed by project expenditures, dedicated person-hours, and other metrics, estimated in the billions<sup>1</sup> USD; and to Lead Plaintiffs:

a. Plaintiff Coronavirus Reporter Corporation, the first-mover in the COVID tracking sector, suffered losses of no less than \$200 million in goodwill, sponsorships, costs and charges for its version 1.0 through 3.0 apps, intended for launch in 2020, 2021 and 2022 respectively.

b. Plaintiff CALID Inc., suffered platform losses in brand goodwill, revenues, operating costs and charges. The "WebCaller" application it managed on behalf of developer and investor Greenflight was Sherlocked by Apple to create FaceTime 15, suffering losses greater than \$4 billion USD.

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<sup>1</sup> By creating an inefficient bottleneck on the entire US smartphone app market, Apple put itself in a precarious liability position for lost value creation. Take for example the Robinhood IPO, which carried a \$35 billion valuation. If Apple blocked just one single app from succeeding at this level, it would be liable for \$105 billion (3x). If it had succeeded in previous efforts to takedown Elon Musk's Twitter, valued at \$50 billion, it would be liable for \$150 billion in treble damages. Our estimate assumes 500 apps were suppressed or rejected, with an average valuation of \$60million. \$200 billion is under ten percent of Apple's market valuation, and it seems reasonable that the aforementioned anti-competitive behaviors would have accrued at least a 10% accrual to Apple's worth. Apple's restrictive practices create negative externalities: thousands of rejected apps represent substantial lost value creation to the US economy.

F. Award each Plaintiff, as applicable, an amount equal to its costs, including reasonable attorneys' fees, incurred in bringing this action.

G. Grant any further relief as may be fair and just.

Respectfully submitted, this 26<sup>th</sup> day of July 2024.

/s/ Keith Mathews

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